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ABSTRACT

This study on the need for and location of new higher education facilities in California is the second in a series of statewide studies spanning two decades. The study assumes that current policies concerning student admissions, distribution of enrollments, and the form and structure of higher education will not change drastically in the near future. It examines in detail the University of California, the California State Colleges, and the public Junior Colleges and focuses on those measures which these systems alone, or in combination can take to accommodate increasing enrollments through more efficient use and development of existing facilities. Attention is directed to the following methods: (1) redirection of excess demand at one or more campuses or colleges within a segment to other campuses or colleges of the same segment with available physical capacity; (2) increasing the planned annual growth of colleges or campuses which have not yet reached their planned maximum enrollment ceilings; and (3) increasing the number of students to be accommodated on a given campus or college by (a) increasing the projected size of the summer term; (b) extending the instructional program into evening hours and Saturday classes, and (c) adding additional facilities. Extensive supporting material is included in the appendix. (AF)

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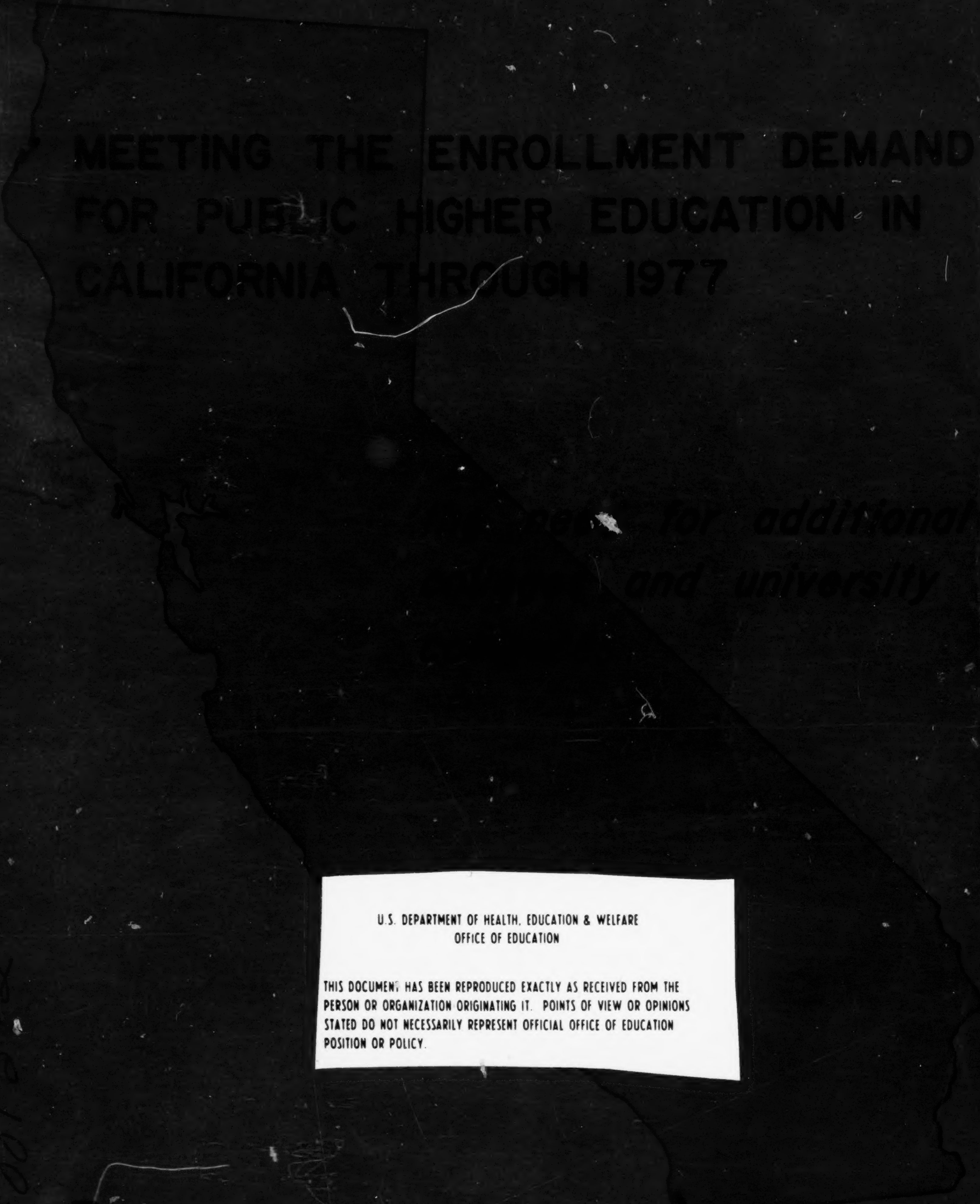
MEETING THE ENROLLMENT DEMAND FOR PUBLIC HIGHER EDUCATION IN CALIFORNIA THROUGH 1977



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A staff report to the
Council for presentation
on February 3-4, 1969

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MEETING THE ENROLLMENT DEMAND FOR PUBLIC HIGHER EDUCATION IN CALIFORNIA THROUGH 1977

The Need for Additional Colleges and University Campuses

HE 001 392

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FOREWORD

One of the major functions of the California Coordinating Council for Higher Education is to advise the Legislature, State officials and the governing boards of public higher education on the need for and location of new facilities. The following report has been prepared by the staff of the Council to enable the Council to develop its advice as appropriate on the need for new centers and related matters.

The report is the second to be prepared for the Council and is one of a series of statewide studies spanning two decades. The study has been conducted in time for report to the 1969 Legislature, as called for in action of the Council in 1964 at the conclusion of the last review of the subject.

Interest in new centers on behalf of various areas of the state has been recently expressed through Legislative resolution as well as in presentations made to the Council's Committee on Physical Facilities in public hearings held in August 1968. Specific Senate and Assembly resolutions are included in Appendix H and a list of persons making presentations to the Committee is shown in Appendix I. The individual area concerns are treated within the staff report within the context of the total question.

It should be noted that the need for additional community colleges in California is considered in comprehensive fashion in contrast to previous statewide studies. State and federal participation in funding of new colleges, greater availability of data, and development of individual district plans have enabled attention to be directed to the plans and needs of this most important segment of higher education for the first time. As pointed out in the study's findings and recommendations, determination of the need for additional Junior Colleges on the basis of data available at a statewide level must necessarily be tempered by local conditions and factors. The recommendations as proposed by the staff provide for procedures through which the Board of Governors of the California Community Colleges may consider special problems not apparent in the comprehensive overview.

In all instances the Council staff has sought to take a point of view designed to ensure the accommodating of anticipated enrollment demand within each segment of public higher education at the least cost to the public, whether the cost is met by state, local or federal agencies.

The study has been conducted assuming current policies concerning student admissions, distribution of enrollments, and the form and structure of higher education. Should major changes be made, then certain of the findings of this review might be modified. In general those matters which might be susceptible to change in the years to come are: (1.) the distribution of lower division students among the segments of higher education, (2.) the emergence of "senior colleges", i.e., those with little or no lower division, (3.) the possibility of developing purely graduate institutions and (4.) admission and retention of students, etc. A further question, not fully considered herein which may affect the need for facilities, is the way in which graduate "demand" can be accurately anticipated. This question requires extensive study and implies projections of manpower needs of California, which presently are most difficult to carry out.

Council staff participating in the preparation of the report included Willard Spalding, study task force leader, David Duxbury, Leland Myers, John M. Smart and Courtland Washburn. Charles McIntyre contributed to the survey as well. The staffs of the Department of Finance, the University of California, the California State Colleges and the California Community Colleges were most cooperative in providing data as needed. Individuals who reviewed drafts of the report from the three segments of higher education provided many useful comments. Responsibility for the report, of course, is that of the Council staff.

January 2, 1969

Owen A. Knorr
Director

GLOSSARY

(Definition of the manner in which terms are used in this report.)

ACADEMIC YEAR -- Refers to the normal nine-month period from mid-September to mid-June, consisting of two semesters or three quarters.

ACADEMIC QUARTER -- This is any one of the three quarters that comprise an academic year.

ACADEMIC SEMESTER -- This is any one of the two semesters that comprise an academic year.

ANNUAL STUDENT DEMAND -- Number of students seeking a full academic year of education (three quarters or two semesters) in a given year. A summer term increment is included for institutions on year-round operation.

BALANCED ENROLLMENT -- The condition of having equal enrollment in each term of a four-quarter or calendar year, when an institution is on year-round operation.

CAPACITY -- The physical space to accommodate students at a given time. It is a function of the number and type of classrooms and laboratories available for class scheduling according to established standards for utilization of facilities. An enrollment ceiling may be above or below actual rated capacity.

COST-BENEFIT ANALYSIS -- A systematic examination and comparison of alternative courses of action that might be taken to achieve specified objectives in terms of the projected costs and benefits to be derived from each course of action.

DIVERSION -- The shifting of lower division students from one segment of public higher education to another segment. Generally used to describe the shift of eligible lower division students from the University of California and State Colleges to other institutions--usually the Junior Colleges.

ENROLLMENT ON AN ANNUALIZED BASIS -- An average of the enrollment in each of the three quarters or two semesters of an academic year exclusive of the summer session. A summer term increment is included for institutions on year-round operations.

ENROLLMENT CEILING -- The enrollment an institution plans to accommodate at any given time. The ultimate enrollment beyond which an institution does not plan to accommodate additional students is referred to as the "maximum planned enrollment ceiling."

EXTENDED USE OF FACILITIES -- Extending the hours of instruction into the evening and to Saturday in order to accommodate additional enrollment within the same physical facilities.

PARTICIPATION RATES -- The percentage of the enrollment of an institution having residence in a specific geographic area, such as a county of the state.

REDIRECTION -- The process of directing eligible applicants for admission from campuses of the University where vacancies do not exist to campuses where vacancies do exist, or from State Colleges when vacancies do not exist to State Colleges where vacancies do exist.

SEGMENTS -- University of California, California State Colleges, public Junior Colleges, and private colleges and universities.

SUMMER SESSION -- A special summer program generally less than 12 weeks in duration. A college on year-round operation could offer a summer session as well as a summer term.

SUMMER QUARTER (TERM) -- A fourth quarter during the period from mid-June to September which is added under year-round operations. It is designed to provide offerings generally equivalent to any other term for regular students.

SUMMER QUARTER INCREMENT -- Actual summer term enrollments divided by three and added to the three-quarter average annual enrollment to provide four-quarter average annual enrollment. A summer quarter increment of 7,000 thus represents actual summer enrollment of 21,000.

YEAR-ROUND OPERATION (Y.R.O.) -- The extension of the conventional academic year of 36 weeks (two semesters or three quarters) to at least 48 weeks of instruction by the addition of a summer quarter (term).

CHAPTER I

INTRODUCTION

Scope of the Report

This is the second major report of the Coordinating Council for Higher Education to examine in detail the need for new centers of higher education in California. The report is prepared in light of the Donahoe Higher Education Act which assigns to the Council the function of:

> . . . development of plans for the orderly growth of public higher education and the making of recommendations on the need for and location of new facilities and programs.[1]

The Legislature has indicated its intent to be guided by the recommendations of the Council concerning new institutions as follows:

> It is hereby declared to be the policy of the Legislature not to authorize or to acquire sites for new institutions of public higher education unless such sites are recommended by the Coordinating Council for Higher Education and not to authorize existing or new institutions of public education other than . . . [State Colleges and University Campuses] to offer instruction beyond the 14th grade level.[2]

The Council completed its first survey in late 1964 and presented its findings and recommendations to the 1965 Session of the Legislature. At that time, the Council found an immediate need for a State College to be located in Kern County--primarily due to the fact that this metropolitan area had no four-year college available to its residents. A "definite ultimate need" for three additional State Colleges was identified, one in Contra Costa County, one in Ventura County and one in either San Mateo or Santa Clara County. A "definite ultimate need" for two additional University of California campuses was also foreseen, one for the San Francisco Bay Area and one for the Los Angeles area.[3]

During the 1965 Session, legislation was enacted and signed by the Governor which established the Kern County State College for which there was found a "definite ultimate need." In the other three areas recommended by the Council, colleges were also established, but with the proviso that their construction could not proceed without resolution of the Trustees of the California State Colleges approved by the Coordinating Council for Higher Education.

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[1] Education Code, Sec. 22703.

[2] Ibid., Sec. 22501.

[3] See Appendix A for text of Council recommendations.

California State College, Bakersfield, is now under development and is scheduled to open in the fall of 1970. Site acquisition has gone forward for property suitable for State College development in Contra Costa, San Mateo and Ventura Counties. Such advance purchase of land has been in accord with the original Council action in 1964 and subsequent Council actions on the subject.

To date the University of California has not sought to acquire land for the proposed University campuses nor has it indicated its intention to develop either of the institutions for which the Council found there was a "definite ultimate need." Final disposition is pending as well on the subject of the need for specialized programs in the San Joaquin Valley as indicated in the 1964 Council recommendations.

The 1964 study of the Council limited its consideration of the needs for additional Junior College facilities to the extent to which the whole of the state was included within districts. Earlier reports, specifically the 1959 Master Plan for Higher Education in its consideration of the need for new facilities and the 1955 Restudy of the Needs of Higher Education, had done much the same. In this present report, however, the need for additional Junior College facilities is given much greater attention for two chief reasons: (1.) The marked expansion of state participation in the capital construction programs of Junior Colleges resulting primarily from legislation enacted in 1967 and subsequent funding through a bond issue in June 1968,[1] and (2.) the improvement in statewide and individual college data available to the Council: inventories of physical facilities, curricula offered, college construction plans and enrollment projections.

California has in its borders more than 60 private colleges and universities both denominational and non-sectarian, in addition to other specialized schools and training institutions. Serving California residents as well as individuals from other states, these institutions play a significant role in providing higher educational opportunities. This report is, of course, confined to the need for new colleges and universities supported from public funds. However such consideration requires reference to the independent institutions. Enrollment data and other tabular presentations throughout the report make reference to the privately-supported institutions as appropriate.

It must be pointed out that the main intent of this study is to consider the need for new centers of public higher education. The question of the need for new facilities on existing campuses is not directly at issue though necessarily there is a relationship. In great measure the expanding enrollments of higher education in the immediate future will require increased capacity and ability to accommodate enrollments--this may be achieved by constructing new buildings, new centers, or by other means designed to increase the efficient use of existing physical plants.

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[1] It also should be noted that federal participation in Junior College construction has commenced since the last Council report.

To summarize, the present report is one of a series of planning documents prepared in California to assure the orderly growth of higher education. Review is required periodically in order to deal with changes in projected enrollments which may occur often and at times unexpectedly. Continual revisions of plans on an orderly basis are called for, as is the need to make new projections into the future.

Approach to the Study

Past studies of the need for new centers of higher education in California have employed a variety of methods to assess and project the need for the establishment of public colleges and their development. In general the approaches have emphasized the examinations of specific regional requirements, with only limited attention to effects upon other areas and existing public institutions or to optimal ways of accommodating new students. This report seeks to continue the effort begun in the 1964[1] survey to examine more explicitly alternative methods of accommodating increasing enrollments as well as to be cognizant of area needs.

Before considering options available to state and local jurisdictions to provide facilities for growing collegiate enrollments, certain assumptions for this study are set forth. These assumptions reflect in part current policies which are either explicitly or implicitly stated:

Assumption 1: The state will continue to educate all eligible students seeking a public higher education with present entrance requirements continuing in effect.[2]

Assumption 2: The proportion of students served by independent institutions will not change markedly within the period under survey.

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[1] The 1964 report, for example, gave considerable attention to the applications of year-round operations.

[2] Changes in admission requirements have profound educational and social effects. Master Plan findings and agreements on admission standards are now under review. However, any changes which might result from this will produce effects which will be examined in the Council's 1973 study of the need for additional centers.

Assumption 3: College-going rates and persistence of students will continue to increase as has been the case in the recent past.

Assumption 4: The form of higher education, *i.e.*, curricular patterns, structure, etc., will continue substantially as is presently the case during the next decade ahead.

Assumption 5: There need be no arbitrary limit upon the number of institutions in the state or within any one system.

Assumption 6: Increasing the capacity of existing institutions to house projected increases in enrollments is deemed desirable when it is economically more feasible than the building of additional facilities at new locations.

Assumption 7: Subject to limitations imposed by site location, the physical plant of an institution of higher education may be expanded by any given factor. (Appendix B considers the various aspects of the question of expansion of planned maximum size, concluding that present data and the literature do not support arguments against large institutions.)

Assumption 8: The concept of year-round operations is sound and when instituted in a judicious manner with reference to costs and benefits on an institution-by-institution basis can result in significant total cost savings for all segments by increasing the capability of an institution to accommodate increased numbers of students in the same facilities.[1]

Options

There are two major options which individually or in combination can provide for enrollments beyond current capabilities of institutions:

Option 1: The establishment of new colleges and campuses to accommodate additional enrollments, and/or

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[1] Studies of the Council in 1964 indicated the potential cost savings in operation of facilities on a year-round basis, as well as increased service to students. The factor of potential savings has recently been validated in a report prepared for the Council by Touche, Ross, Bailey and Smart--an independent management consulting firm. Though none of these studies has considered application of year-round operations in junior colleges, the findings of the investigations are clearly applicable and are assumed so in this report.

Option 2: Increasing the capability of existing institutions to accommodate additional enrollments.

As a general proposition it is believed more desirable to seek ways and means of accommodating additional enrollments by the second option -- increasing the capability of existing institutions to accommodate additional enrollments. There are several ways (or "sub-options") in which this may be accomplished and which are considered for application in this report. It should be stressed, however, that in any event additional numbers of students must be educated and housed in the years ahead. New facilities on existing campuses will be required, and total costs of operations will increase. The intent herein in considering options for application is to minimize costs to the local taxpayers while continuing to assure a quality program for higher education with choices open to the student consistent with his interests and abilities.

Under option 2, above, the following policies can increase the capability of institutions to accommodate additional enrollments.

A. Redirection of Students. The redirection of students from the college or campus of their first choice may occur within segments in instances where particular institutions are topping-out.[1] Presently among campuses of the University system, students are being redirected to other campuses who have given first preference to attend the crowded Berkeley and Los Angeles campuses, for example. Redirection has also been necessary when demand exceeds existing facilities at the developing campuses such as Irvine and Santa Cruz. Redirection is also occurring in some degree for students who might otherwise attend San Francisco State College and San Jose State College, though such redirection is not handled in a centralized manner in the State Colleges as it is in the University.[2] Junior Colleges may redirect within their own districts in the case of multi-campus districts. Redirection to Junior Colleges outside the district is not the rule.

The University of California, with a statewide emphasis, can redirect students to any of its campuses where hardship to the student is not at issue. The State Colleges with an historical regional emphases appear in a somewhat different context (though some colleges such as California State Polytechnic College at San Luis Obispo, Chico State College, Humboldt State College, and San Jose State College are statewide in drawing power). For the State Colleges, redirection can perhaps best be applied, if necessary, to those students who wish to attend the college reaching its planned maximum enrollment and who plan to travel from a county of residence which contains or is near other State Colleges not experiencing enrollment pressures. For example, the resident of Los Angeles County wishing to attend San Jose State College could be redirected to the California State College at Dominguez Hills or to another State College in some other area of the state if the student desires to attend college away from home, provided in each case that the desired educational program is available.

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[1] See glossary for definition of diversion.

[2] A student applying to any University campus is admitted, if eligible, to the University as a whole. He indicates his first, second and third choices of campuses. If his first choice cannot accommodate him he is "redirected" to his second or third choice. Continuing students, of course, have priority over new admittees. In the State Colleges there is no "single admission" to all State Colleges. If quotas are filled at one college, the student may request that his records be sent to another. Early cut-off dates for admission have been used primarily as the method for controlling student in-put.

Orderly redirection of students within one system from four-year, public institutions which are topping-out is considered as a valid option in this report. University students under this option may be redirected to any University campus; State College students to any State College within the area in which they permanently reside or, if they choose, another State College not experiencing pressures of enrollment. It is assumed that Junior College students may not be easily redirected to colleges outside their district because of present statutory restrictions.

B. The Amount of Annual Growth. Additional enrollment demand may be accommodated by increasing the amount of annual growth of existing campuses and colleges. The option of increasing annual growth is used in considering the need for new State Colleges and campuses of the University of California. In practice, Junior Colleges have been planned to receive all-comers at a particular point in time and within a relatively small area and therefore variation in annual growth rates is not directly applicable to them.

It is presumed that there is a point at which a given campus cannot efficiently accommodate annual growth without affecting the educational program--i.e., ability to hire large numbers of faculty, organize courses and curricula, provide supporting services, etc. No evidence, however, is available bearing on the educational effects of a given growth rate; it is therefore clear that this option must be applied with caution and in light of past experience.

C. Year-round Operations. When instituted after cost-benefit analyses, in a judicious manner on campuses of sufficient size, summer terms potentially are able to accommodate a proportion of the annual enrollment demand. This option is considered in examining the need for new State Colleges, campuses of the University of California and Junior Colleges. As the summer term enrollment approaches the average enrollment of other terms greater efficiency results.

D. Extension of Hours of Instruction. It may be reasonable to extend hours of instruction into the evening hours and to Saturday morning in an effort to accommodate additional enrollments within the same physical plant. Such action could imply a change in established utilization standards upon which present State capital outlay funds are made available. Current standards call for certain levels of utilization within a five-day week, 8a.m.-5p.m.--or a 45-hour week.[1] Junior Colleges and some State Colleges now make extensive use of evening hours for instruction. The University of California does only to a limited extent. Saturday classes are not generally the rule.

Assuming an institution-by-institution analysis of the advantages of extending class offerings for full-time students into the evening and/or Saturday, this option is considered for application in this study, particularly in respect to the University of California and in some degree to the State Colleges.

E. Expansion of Institution Size. In assessing the need for new centers of higher education, the expansion of existing campus capacity to accommodate additional enrollment is assumed possible wherever the physical site permits. The desirability of such expansion may be determined by weighing costs and benefits of expansion with the costs of providing facilities and the costs and benefits of a new center of higher education. Such expansion may imply the raising of planned maximum enrollment ceilings and normally would include the necessity to plan for more physical facilities on the existing campus.

One other possibility can be stated which could have effect on the need for new State College and University centers and which in substance reduces the enrollment demand on these institutions. This would be the restriction of State College and/or University intake of lower-division students who would otherwise be eligible and who would normally attend the four-year colleges. The first steps in this direction were taken in the 1959 Master Plan which established a policy of diversion of lower-division students to the Junior Colleges from the University and the State Colleges so that the result would be a ratio of 60% upper division to 40% lower division enrollments in the two, four-year segments by 1975.

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[1] Space and utilization standards also include measures of the extent to which each classroom is occupied on the average during the period 8a.m.-5p.m. as well as the assignable square feet for desks, laboratory equipment, etc. Changes in these technical aspects of the standards are not considered as within the option since the whole of the subject has been reviewed in 1966 and reported in the CCHE report, Space and Utilization Standards, California Public Higher Education, CCHE No. 1027, Sept. 1966.

The State Colleges have already met this goal, the University has made only limited progress.

A number of variations are apparent ranging from a complete elimination of lower division programs at existing State Colleges and University campuses, to elimination of the freshman and sophomore years at selected institutions, to establishment of new centers as "senior colleges" (colleges without the lower division). The latter has been selected as a policy for certain institutions in New York, Florida, Illinois, and most recently Texas.

In 1967 the Council staff in response to legislative resolution found some possible merit in the establishment of institutions without the lower division, and in the phasing-out of lower division in certain other special instances.[1]

It is significant to note, however, that the elimination of lower-division instruction at any University of California campus or California State College would not increase upper-division and graduate student capacity by the number of the lower-division students diverted to the Junior Colleges or independent colleges. Of the total lower-division students diverted, about two-thirds of that number in upper-division and graduate students could be handled in the same plant because of curricula demands on facilities. Or, in other words, it might be necessary to increase facilities by up to one-third to handle the same total number of students in attendance prior to lower-division redirection, since each graduate and upper-division student requires more space than a lower-division student.

In the absence of policy statements beyond those of the 1959 Master Plan which would reapportion lower-division enrollments, the option of adjusting the proportion of lower-division students taken into the University and State College segments is not considered for application in this study.[2]

Economic Considerations of College Location

Once a university or college is determined as being needed, its location may result from giving substantial weight to social and economic needs of a given region. A recent legislative report stated:

> Can University campuses be used deliberately and appropriately as anchors for urban redevelopment plans? Should rural locations be selected for campuses in order

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[1] Action on the staff report was postponed indefinitely. See Appendix C for text of staff recommendations made in the 1967 report.

[2] Diversion of large numbers of students would mean some corresponding need for Junior College physical capacity (though it is not certain that this would be on a 1 to 1 basis because of current surplus capacities of some colleges)--thus while reduced capital outlay might be the case in the four-year segments, some increase would be noted among local Junior Colleges.

> to offset declining regional economic activity? Should universities and colleges be used explicitly as instruments of social engineering? Broadly stated, what other important public purposes in addition to those of education, can be served by an educational investment?[1]

Phase II of the Report of the California State Development Plan Program in its discussions of patterns of urbanization states:

> It is obvious that no consideration has been given to the location of four-year institutions as an instrument of economic or physical development, unless one considers the political pressure exerted among cities and counties in metropolitan areas as evidence of such consideration.
>
> If the matter of university location were given more conscious thought as a tool of State policy, many other issues such as the fiscal and planning impact on communities caused by these facilities including roads, housing, cultural facilities, community services and recreation could be better handled through improved coordination between the State agencies and greater cooperation with affected local government.[2]

Anticipated impacts upon communities and regions have been presented as reasons for colleges or campuses to be located in areas represented by persons appearing before the Committee on Physical Facilities of the Coordinating Council. Attractive descriptions of what the presence of a college would produce were presented vigorously.

The presence of a college in a region produces a college-going rate which is greater than that found in regions without a college. A large portion of the increase comes from students who attend college part-time, while working to support themselves and, often, their families as well. Thus there exists, in every well-populated area of the state without ready access to a college or campus, a substantial potential enrollment, which needs higher education.

On the other hand, examination of what has actually occurred at State Colleges remote from heavily populated areas reveals that growth is slow. Reaching an enrollment size which enables economies of scale in operating costs requires many years.

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[1] California Legislature, Joint Committee on Higher Education, The Academic State, 1968, p. 5.

[2] California State Office of Planning, Phase II Report, California State Development Plan Program, 1968, p. 182-3.

The growth of the environs of the Riverside and Davis campuses of the University reveals little apparent immediate impact upon regional economy, other than agriculture. New campuses at Irvine and Santa Cruz have not developed enough to make judgments about their impacts, but preliminary evidence indicates substantial changes near Irvine, few, if any, near Santa Cruz. And Irvine was located in what was already one of the most rapidly growing areas of California.

Thus one can conclude that, to date, State Colleges and University campuses, when located where there are many persons to be educated, provided a needed service to large numbers of local students. When located in less populous areas, they provided a needed service to small numbers of local students and had apparently little impact upon the economy of the region or the state, except that made by local institutional expenditures and those of college personnel and students.

1. Location of colleges and campuses as elements in building or reconstructing a region, is intellectually attractive, but the art of planning has not yet reached a degree of sophistication to weigh all of the impinging forces and factors within a region, to determine their interactions with a potential institution, or to decide which among competing regions is most deserving. The location of colleges or campuses for social and economic reasons is not considered in this report when assessing the need and location of new facilities.

2. The report considers the location of colleges or campuses primarily on the basis of the intent to provide educational services to the largest possible potential number of individuals.

Summary

The chapters which follow are directed to the primary question: whether new centers of public higher education are needed to meet anticipated student demand for collegiate level training. In considering this question, effort is made to focus upon those measures which may alone, or in combination, enable the University of California, the California State Colleges and the public Junior Colleges to accommodate increased enrollments through more efficient use and development of existing colleges and campuses before the establishment of new centers.

The methods given particular attention in this report are:

1. Redirection of excess demand at one or more campuses or colleges within a segment to other campuses or colleges of the same segment with available physical capacity.

2. Increasing the planned annual growth of colleges or campuses which have not yet reached their planned maximum enrollment ceilings.

3. Increasing the number of students to be accommodated on a given campus or college (in many instances this implies the increasing of the planned maximum enrollment ceiling where feasible) by one or more of the following.

    a. Increasing the projected size of the summer term under year-round operations.

    b. Increased use of each campus or college by extension of the instructional program into evening hours and use of Saturday classes.

    c. Adding additional facilities to the existing campus.

If in the analysis it appears these means cannot be applied in enough particular cases or when applied singly or in combination fail to give assurance that demand can be met, then a new center of higher education may be indicated.

CHAPTER II

PROJECTIONS OF ENROLLMENTS AND THE IMPLICATIONS FOR THE NEED FOR ADDITIONAL CENTERS

Estimates of Population

Projections for higher education, while related to estimated increases in the general population, are most closely related to estimated changes in the number of 18-24 year olds, the age group comprising the bulk of college students, and to changes in the number of high school graduates, from which come most members of each freshman class.

Although the total population of California is estimated[1] to rise from 19,662,000 in 1968 to 29,105,000 in 1985 through regular increase, estimates for the 18-24 year old group and for high school graduates do not follow precisely the same pattern. (See Table II-1.) In 1982, the estimated number of high school graduates declines and continues to decline through 1984. The estimate for 1985 is approximately equal to that for 1975. In 1983 the 18-24 year age group declines and the decline continues to 1989. These data imply that, to the extent that the number of students attending college is a fraction of the number of high school graduates or the number of 18-24 year olds, physical facilities sufficient to house the actual enrollment in 1975-1979 period will again be sufficient in 1985. (Projections of the Department of Finance assume no major changes in college-going and persistence rates during the 10-year period).

A graphic presentation of the projection of high school graduates, the 18-24 year old age group and the total population is shown in Figure II-1.

Estimates of Enrollments in Higher Education

In considering future enrollment expectations, it must be noted that projected enrollments are derived from past experience; the demographer cannot take unknown future events into account. Change in human choice can rarely be predicted in advance. In projecting college enrollments, three factors may have increasing influence upon the relationship of college enrollments to the number of high school graduates and to the number of 18-24 year olds: (1) the proportion of each group deciding to attend college, (2) the number of college students who continue in college, and (3) the number of college graduates who enroll in graduate school. Each of these factors is discussed below.

High School Graduates and 18-24 Year Olds Attending College. College attendance and college graduation are important factors in social mobility, with a college degree becoming a requirement for entry or later advancement

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[1] Estimated and Projected Population of California, 1960-2000, California State Department of Finance, June, 1968. Note: The report contains four different projections based upon different assumptions concerning migration and birthrate. The series used by the Council staff is the Series I-D projection which assumes that net migration will level at 300,000 per year and that the fertility rate will be at the lowest of four possibilities established by the United States Census Bureau. The Department of Finance has indicated that recent data show that the projections may be high since it now appears that net migration will be less than 300,000 per year and the fertility rate will be lower than that used in the projection.

TABLE II-1

ACTUAL AND PROJECTED TOTAL POPULATION 18-24 YEAR OLD POPULATION AND PUBLIC 12TH GRADE GRADUATES 1966-1985 1966-2000

Year	Public High School Graduates[a]	18-24 Year Old Population	Total State Population[b]
1966	242,762	1,881,500	18,792,000
1967	252,316	1,986,300	19,185,000
1968	256,550	2,107,700	19,662,000
1969	267,000	2,232,500	20,154,000
1970	278,325	2,368,800	20,654,000
1971	288,000	2,518,300	21,152,000
1972	298,375	2,615,700	21,662,000
1973	302,300	2,685,800	22,180,000
1974	314,950	2,768,600	22,705,000
1975	324,700	2,858,048	23,235,000
1976	326,275	2,953,131	23,773,000
1977	331,150	3,038,722	24,324,000
1978	339,050	3,116,186	24,888,000
1979	347,050	3,193,321	25,463,000
1980	347,350	3,260,829	26,049,000
1981	348,000	3,299,671	26,644,000
1982	343,000	3,325,671	27,249,000
1983	330,000	3,322,230	27,861,000
1984	323,000	3,287,684	28,480,000
1985	325,000	3,247,631	29,105,000
1986	- - -	3,205,801	- - -
1987	- - -	3,175,377	- - -
1988	- - -	3,158,991	- - -
1989	- - -	3,147,416	- - -
1990	- - -	3,172,888	32,255,000
1995	- - -	3,578,277	35,401,000
2000	- - -	4,125,882	38,571,000

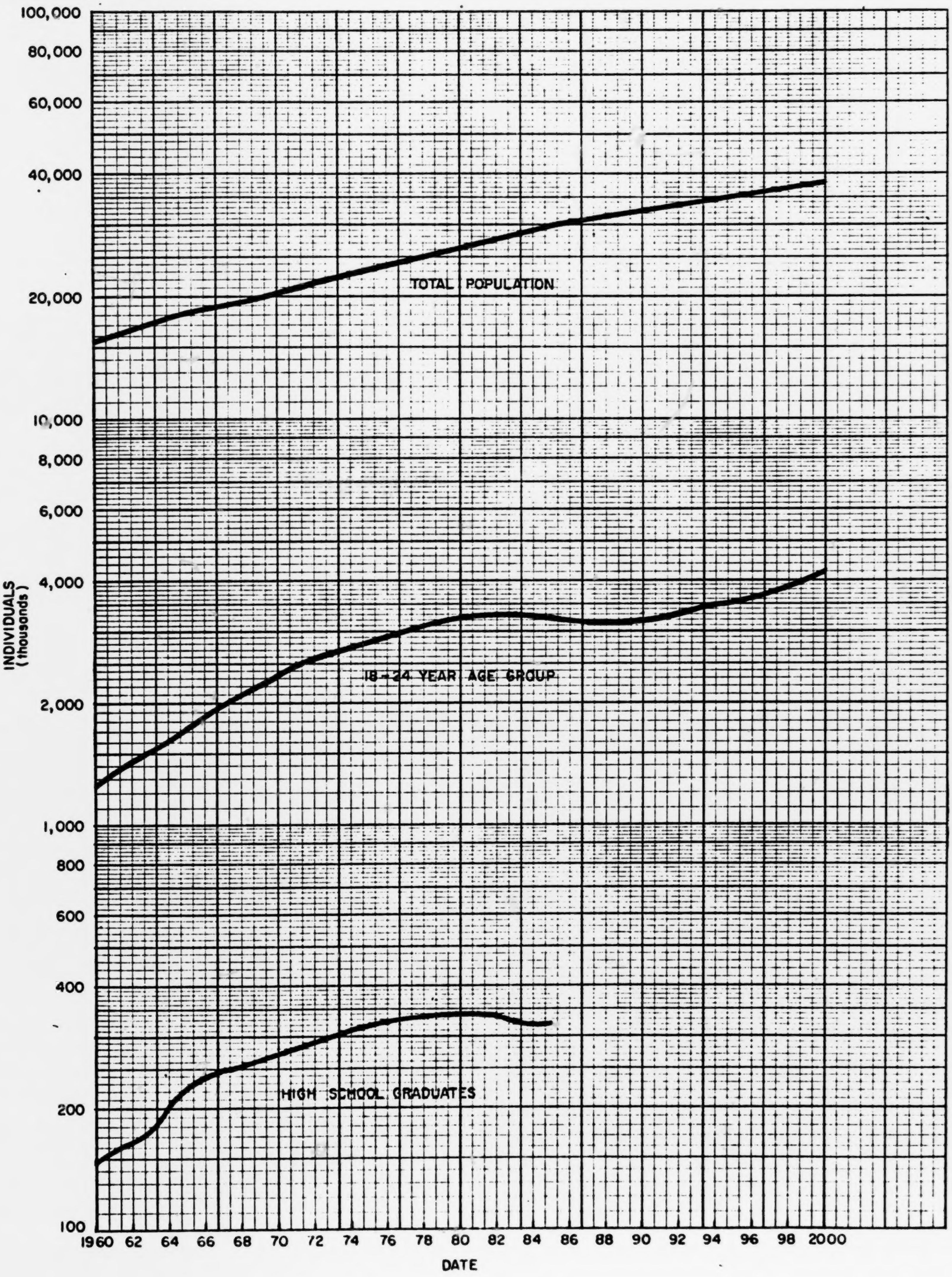
SOURCE: California State Department of Finance

[a] Not projected beyond 1985.

[b] Annual projections discontinued after 1985.

FIGURE II - I

CALIFORNIA TOTAL POPULATION AND 18 - 24 YEAR AGE GROUP 1960 - 2000, AND HIGH SCHOOL GRADUATES 1960 - 85



in an increasing proportion of employment. Thus the push of high school graduates to, and through, college is expected to increase as more parents become convinced that this is the road to a better life for their children. Recent legislation to provide grants, employment, and loans for students reflects public concern about assuring equality of access to higher education. More legislation at national and state levels can be expected.

An increased number of college educated persons among minority groups has been found to be desirable in many studies of current social problems. Toward this objective, the Council recently recommended that University and State College admission requirements be revised to allow an additional 2% exception to requirements for freshmen and transfer admissions in order to accommodate disadvantaged students with capacity to succeed in college. More importantly, many present programs in elementary and secondary schools are designed to remove educational disadvantages from students and so to produce substantially more high school graduates with ability to succeed in higher education. The effects of these programs upon college enrollments cannot be predicted now, but they could be significant.

At the present time about 60% of the high school class in California can be expected to enter a two or four-year institution of higher education. How quickly this proportion will grow is most difficult to assess.

The Number of Undergraduate Students Who Continue in College. Studies of higher education in California and elsewhere reveal substantial drops in the size of an entering class as it progresses through college. Other studies indicate that many students who drop out of one institution enter another. In a state as large as California, with three massive segments of public higher education, a change in the number or rate of drop-outs or of re-entry could have significant effect upon college enrollments.

Currently all three segments are concerned about learning more about why students decide to drop out or stay in college or to transfer elsewhere. With more knowledge of causes, programs to encourage persistence can be expected, with resultant increases in the number of students who continue in college.

Further, of potentially great immediate impact, could be widespread development in Junior Colleges of programs intended to prepare disadvantaged students to enter State Colleges or University campuses in the upper division. With the end of war in Viet Nam, the GI Bill could lead to increased enrollments.

The Number of College Graduates Who Continue in College. A graduate degree is required for entry into a relatively few but increasing number of occupations. In addition, research is becoming more and more important in business, industry, and government with consequent heavy demands for graduate students prepared to do research. Thus many opportunities for interesting, well-paid work are contingent upon graduate study.

In addition, rapid, geometric rates of increase in the amount of knowledge are generating demands for longer periods of time in which to teach students what they need to know. Five-year programs are becoming common in areas such as engineering, architecture and education. Some scholars of higher education envision a master's degree as the first degree in many academic fields.

The combined effects of employment opportunity and extensions of academic programs through a fifth year could lead to significant increases in college graduate enrollment present in the system. Current draft policies may lead to some immediate reduction in graduate enrollment.

Though there appear to be general long-range trends towards expansion of the college-going group and increased persistence, too little is known about future trends in birthrates or about future trends in attendance and persistence patterns of the 18-24 year old group or of high school graduates to warrant any modification of existing official projections. Whatever these trends become, the state's demographers use procedures which will take account of them in future estimates of population.

Estimates of Enrollments in the Segments of Higher Education

For many years the California State Department of Finance has prepared the enrollment projections required for higher education purposes. The technique used by the department, based upon grad-progression ratios, also referred to as "cohort-survival", provides reasonably accurate projections for not more than twelve years. Projections beyond this interval can be made by extrapolating existing trends, but such projections can be unreliable.

Longer-term projection methods are now being developed by the Department of Finance, through an investigation supported in part by federal funds provided through the Coordinating Council for Higher Education. In the absence of these longer-term projections, the current study of additional centers again employs these "official projections" of the Department of Finance.

Procedures for arriving at final estimates of future enrollment differ for each segment. In respect to the California State Colleges, the Department of Finance prepares an initial overall projection (referred to as the "Phase I" projection) for the fall term enrollment of full-time[1] students, both graduate and undergraduate, for the segment as a whole. The Chancellor's office then distributes the overall figures among the various State Colleges, indicating the projected fall-term enrollment of full-time students for each college for each year of the projections. (These projections are referred to as "Phase II".)

For the Junior Colleges, the Departments ten-year projections indicate the number of day-graded students[2] expected in each Junior College district in the fall term. These are sent to individual districts for their use in developing 10-year master plans required for receipt of state funds for capital outlay. Each district after reviewing the projections may request revision.

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[1] Enrolled for more than twelve units.

[2] Enrolled for one or more units, 8:00 A.M. to 5:00 P.M.

For the University, "Phase I projections" indicate projected fall term enrollment of undergraduate students by lower division and upper division levels. The University then converts these figures into an average annual headcount through use of the ratios of .9089 for lower division, 1.0238 for upper division. (The difference in ratio reflects lower division dropout and upper division new admission.) The projected annual average undergraduate headcount is then divided by the President's office among the various University campuses, by level of instruction. (In view of the Master Plan recommendation that a 41:59 ratio between the lower and upper divisions and later amended by CCHE and segmental agreement to 40:60, be reached by 1975. University projections reach a 42:58 ratio in 1975-76.) The University also includes an estimated increment in average annual enrollment of undergraduates from year-round operations.

Projections of graduate enrollment, prepared by the University rather than by the Department of Finance, also include an estimated increment from year-round operation. These projections are then distributed by the President's office among the various campuses of the University where they are added to the undergraduate enrollment estimates provided by the Department of Finance.

Private college figures have been developed from a recent Association of Independent California Colleges and Universities' survey.

The projected fall term enrollment of full-time students in each segment is shown below in Table II-2.

TABLE II-2

ACTUAL AND PROJECTED FALL TERM ENROLLMENTS IN THE FOUR SEGMENTS OF CALIFORNIA EDUCATION[1]

Fall Term	Junior Colleges		University		State Colleges		Private Colleges	
	Full Time	Total	Full Time	Total	Full Time	Total	Full Time	Total
1950	57,600	134,572	N.A.	38,500	N.A.	33,500		
1951	N.A.[2]	N.A.	N.A.	34,883	N.A.	31,227		
1952	N.A.	N.A.	N.A.	33,770	N.A.	33,589		
1953	N.A.	N.A.	31,890	33,382	24,712	38,584		
1954	63,019	194,510	32,563	34,880	29,224	45,206		
1955	70,165	211,184	37,035	38,167	33,910	52,802	46,996	53,641
1956	74,082	N.A.	37,522	40,313	38,338	62,785		
1957	80,916	227,698	39,444	42,087	41,582	72,083	52,116	59,691
1958	91,162	256,856	41,166	43,547	44,679	81,030	53,998	64,620
1959	90,254	N.A.	42,386	44,878	49,473	87,844	N.A.	
1960	99,783	289,898	46,801	49,169	56,480	95,081	N.A.	
1961	112,636	305,201	51,351	54,265	64,099	105,858	N.A.	
1962	121,283	336,704	55,695	58,536	71,502	118,119	N.A.	
1963	128,221	368,008	61,139	64,725	80,188	133,109	N.A.	
1964	152,401	411,338	67,070	71,267	92,471	148,952	N.A.	
1965	188,874	459,400	76,158	79,437	98,840	154,965	84,342	93,486
1966	198,185	487,458	83,674	87,033	110,274	169,520	84,336	89,176
1967	213,496	521,695	92,295	95,337	122,426	185,601	89,729	97,699
1968	237,491	N.A.	98,725		131,785		93,318	
1969	258,913	N.A.	103,572		139,419		97,050	
1970	282,245	N.A.	113,695		149,088		100,932	
1971	303,477	N.A.	120,916		159,117		104,969	
1972	323,802	N.A.	128,270		169,696		109,167	
1973	337,792	N.A.	135,370		180,182		113,533	
1974	355,906	N.A.	142,741		190,781		118,074	
1975	374,855	N.A.	149,377		201,123		122,797	
1976	389,210	N.A.	155,551		210,650		127,709	
1977	399,044	N.A.	161,810		221,662		132,817	

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[1] SOURCE: Department of Finance

[2] N.A. = Not Available

The distribution of undergraduate enrollments among the public segments has remained comparatively constant in the 1960's. The University of California full-time enrollments amounted to some 14% of total full-time undergraduate enrollment in the state in 1967 (it stood at 13.6% in 1961). The State College proportion increased slightly from 23.9% in 1961 to 25% in 1967. Junior colleges in 1961 accommodated 44.4% of all undergraduate full-time students and 47.7% in 1967. Private colleges and universities, though increasing in enrollments, declined in proportion from 18% to 13.4%.

Enrollment projections indicate the need to assure a capacity in public higher education institutions for some 776,000 full-time students in 1977 with modest increases or even a decline in the 1980's and then a modest increase thereafter.

The chapters following consider whether the anticipated demand can be met by existing facilities, whether those facilities must be modified or expanded, and in the event of a need for new facilities, where they could be located.

Chapter III attempts an overall view of higher education service to the state as a whole with attention to interests in certain areas. It also introduces some alternative approaches to the providing of service to populations not now served or in need of supplemental services.

CHAPTER III

NEW CENTERS FOR HIGHER EDUCATION AND REGIONAL CONSIDERATIONS

The need for higher education opportunities within regions has been emphasized in past surveys due in great measure to the size and geographical diversity of California. Community colleges have been planned and located exclusively on a local basis as their purpose is in great measure to meet the post-secondary education needs of a particular area or community. Traditionally most California State Colleges have been considered regional institutions catering to the requirements of residents of a particular area for baccalaureate and first-stage graduate work. Curricula, limited residence facilities, low cost of education to the student, all have reflected this regional orientation. However, a number of State Colleges have developed as statewide or semi-statewide institutions in that they draw substantial numbers of students from beyond their immediate geographical service areas. San Jose State College, Chico State College and California State Polytechnic College at San Luis Obispo are cases in point.

Individual campuses of the University of California are statewide institutions, the need for an additional campus has been primarily asserted to relate to a statewide need, rather than a local one. It is, nevertheless, to be noted that existing University campuses are distributed throughout the state as can be seen in Figure III-1. Furthermore, interest in additional campuses was expressed during this present study and in the 1964 study by representatives of "have-not" regions such as the central San Joaquin Valley and the upper Sacramento Valley in part for benefit of the economy of the area. This interest has required consideration of the need for University campuses in areas not now "served" even though the University is normally seen as an institution statewide in attraction.

In contrast to previous reports, this study does not stress a systematic analysis of all regions of the state for purposes of determining the need for additional State Colleges or University campuses. This is the case because: (1.) nearly all regions (however defined) are now served by a State College or a University campus or both; (2.) any regional emphasis tends to detract from overall statewide needs and considerations deemed most essential for emphasis in this study due to a possible enrollment plateau of 1980's, and (3.) no definition of regions appears to be wholly useful for meaningful analysis in terms of this present study. (Previous studies have used State Economic Areas or other arbitrary enrollment areas as bases for calculating college-going rates, surveys of existing institutions, etc., - none has been wholly satisfactory.)

Regional needs, however, are emphasized to a much greater degree in the section concerning the community colleges in light of their almost exclusive local orientation and commuter college characteristics.

In consequence, the following material presents a number of considerations relevant to the need for additional centers not placed in the frame of arbitrary regional demarcations. Where area interest in a new State College or University campus is discussed, the area is defined for that

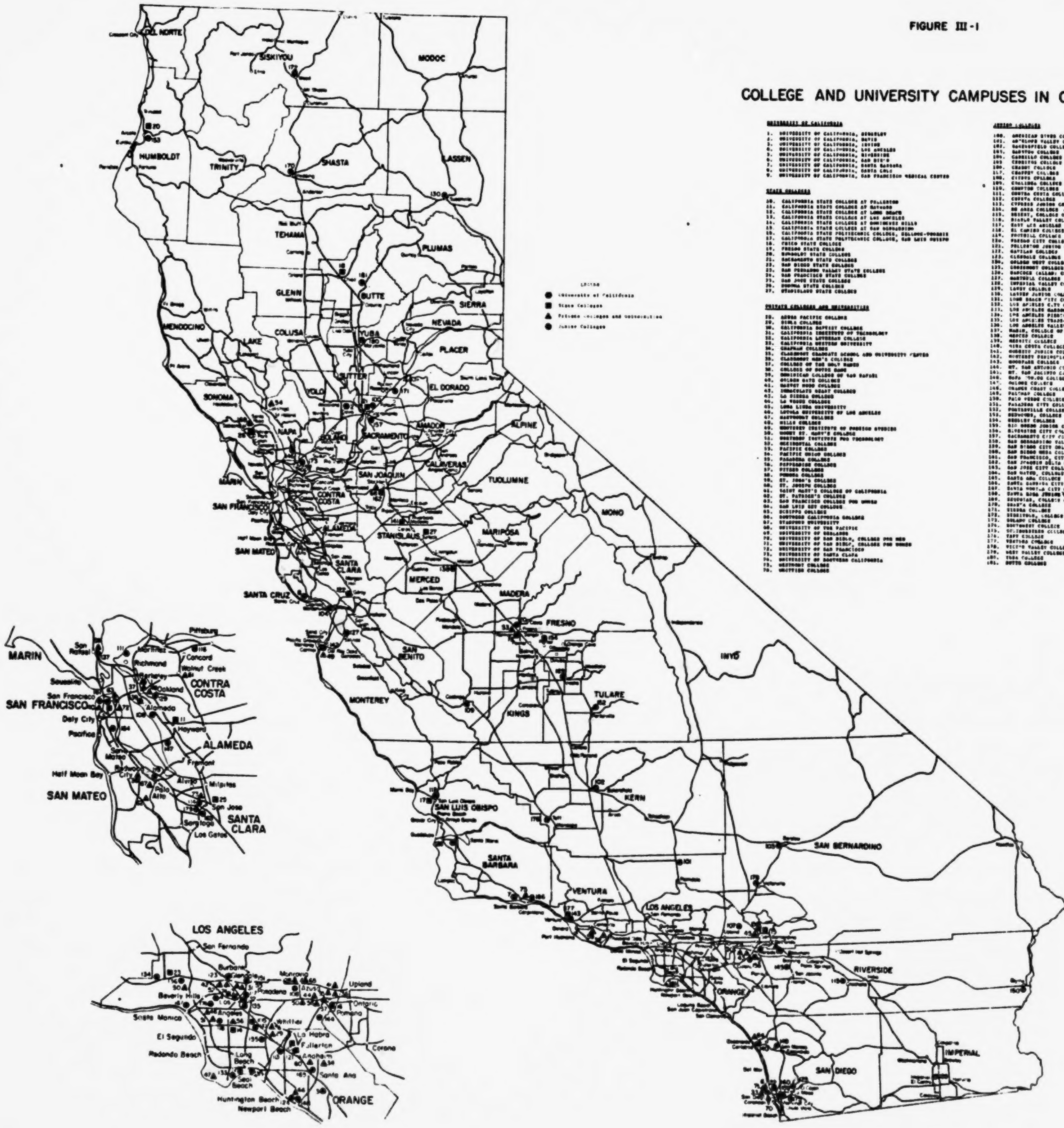
LEGEND
● University of California
■ State Colleges
▲ Private Colleges and Universities
● Junior Colleges
DEL NORTE
SISKIYOU
MODOC
HUMBOLDT
TRINITY
SHASTA
LASSEN
TEHAMA
PLUMAS
GLENN
BUTTE
SIERRA
MENDOCINO
COLUSA
YUBA
NEVADA
PLACER
LAKE
SUTTER
EL DORADO
SONOMA
YOLO
NAPA
ALPINE
AMADOR
SACRAMENTO
MARIN
SAN JOAQUIN
CALAVERAS
TUOLUMNE
SAN FRANCISCO
CONTRA COSTA
MONO
SAN MATEO
ALAMEDA
STANISLAUS
MARIPOSA
SANTA CLARA
MERCED
SANTA CRUZ
MADERA
FRESNO
INYO
SAN BENITO
MONTEREY
KINGS
TULARE
KERN
SAN LUIS OBISPO
SANTA BARBARA
SAN BERNARDINO
VENTURA
LOS ANGELES
RIVERSIDE
ORANGE
SAN DIEGO
IMPERIAL
Pittsburg
San Rafael
Martinez
Concord
Richmond
Walnut Creek
Berkeley
Oakland
Sausalito
San Francisco
Alameda
Daly City
Hayward
Pacifica
Fremont
San Mateo
Half Moon Bay
Redwood City
Alviso
Milpitas
Palo Alto
San Jose
Saratoga
Los Gatos
San Fernando
Burbank
Glendale
Monrovia
Azusa
Upland
Beverly Hills
Pasadena
Ontario
Santa Monica
Los Angeles
Pomona
Whittier
El Segundo
La Habra
Fullerton
Corona
Redondo Beach
Long Beach
Anaheim
Seal Beach
Santa Ana
Huntington Beach
Newport Beach

FIGURE III-1

COLLEGE AND UNIVERSITY CAMPUSES IN CALIFORNIA

UNIVERSITY OF CALIFORNIA

1. UNIVERSITY OF CALIFORNIA, BERKELEY
2. UNIVERSITY OF CALIFORNIA, DAVIS
3. UNIVERSITY OF CALIFORNIA, IRVINE
4. UNIVERSITY OF CALIFORNIA, LOS ANGELES
5. UNIVERSITY OF CALIFORNIA, RIVERSIDE
6. UNIVERSITY OF CALIFORNIA, SAN DIEGO
7. UNIVERSITY OF CALIFORNIA, SANTA BARBARA
8. UNIVERSITY OF CALIFORNIA, SANTA CRUZ
9. UNIVERSITY OF CALIFORNIA, SAN FRANCISCO MEDICAL CENTER

STATE COLLEGES

10. CALIFORNIA STATE COLLEGE AT FULLERTON
11. CALIFORNIA STATE COLLEGE AT HAYWARD
12. CALIFORNIA STATE COLLEGE AT LONG BEACH
13. CALIFORNIA STATE COLLEGE AT LOS ANGELES
14. CALIFORNIA STATE COLLEGE AT DOMINGUEZ HILLS
15. CALIFORNIA STATE COLLEGE AT SAN BERNARDINO
16. CALIFORNIA STATE POLYTECHNIC COLLEGE, KELLOGG-VOORHIS
17. CALIFORNIA STATE POLYTECHNIC COLLEGE, SAN LUIS OBISPO
18. CHICO STATE COLLEGE
19. FRESNO STATE COLLEGE
20. HUMBOLDT STATE COLLEGE
21. SACRAMENTO STATE COLLEGE
22. SAN DIEGO STATE COLLEGE
23. SAN FERNANDO VALLEY STATE COLLEGE
24. SAN FRANCISCO STATE COLLEGE
25. SAN JOSE STATE COLLEGE
26. SONOMA STATE COLLEGE
27. STANISLAUS STATE COLLEGE

PRIVATE COLLEGES AND UNIVERSITIES

28. AZUSA PACIFIC COLLEGE
29. BIOLA COLLEGE
30. CALIFORNIA BAPTIST COLLEGE
31. CALIFORNIA INSTITUTE OF TECHNOLOGY
32. CALIFORNIA LUTHERAN COLLEGE
33. CALIFORNIA WESTERN UNIVERSITY
34. CHAPMAN COLLEGE
35. CLAREMONT GRADUATE SCHOOL AND UNIVERSITY CENTER
36. CLAREMONT MEN'S COLLEGE
37. COLLEGE OF THE HOLY NAMES
38. COLLEGE OF NOTRE DAME
39. DOMINICAN COLLEGE OF SAN RAFAEL
40. GOLDEN GATE COLLEGE
41. HARVEY MUDD COLLEGE
42. IMMACULATE HEART COLLEGE
43. LA SIERRA COLLEGE
44. LA VERNE COLLEGE
45. LOMA LINDA UNIVERSITY
46. LOYOLA UNIVERSITY OF LOS ANGELES
47. MARYMOUNT COLLEGE
48. MILLS COLLEGE
49. MONTEREY INSTITUTE OF FOREIGN STUDIES
50. MOUNT ST. MARY'S COLLEGE
51. NORTHROP INSTITUTE OF TECHNOLOGY
52. OCCIDENTAL COLLEGE
53. PACIFIC COLLEGE
54. PACIFIC UNION COLLEGE
55. PASADENA COLLEGE
56. PEPPERDINE COLLEGE
57. PITZER COLLEGE
58. POMONA COLLEGE
59. ST. JOHN'S COLLEGE
60. ST. JOSEPH COLLEGE
61. SAINT MARY'S COLLEGE OF CALIFORNIA
62. ST. PATRICK'S COLLEGE
63. SAN FRANCISCO COLLEGE FOR WOMEN
64. SAN LUIS REY COLLEGE
65. SCRIPPS COLLEGE
66. SOUTHERN CALIFORNIA COLLEGE
67. STANFORD UNIVERSITY
68. UNIVERSITY OF THE PACIFIC
69. UNIVERSITY OF REDLANDS
70. UNIVERSITY OF SAN DIEGO, COLLEGE FOR MEN
71. UNIVERSITY OF SAN DIEGO, COLLEGE FOR WOMEN
72. UNIVERSITY OF SAN FRANCISCO
73. UNIVERSITY OF SANTA CLARA
74. UNIVERSITY OF SOUTHERN CALIFORNIA
75. WESTMONT COLLEGE
76. WHITTIER COLLEGE

JUNIOR COLLEGES

100. AMERICAN RIVER COLLEGE
101. ANTELOPE VALLEY COLLEGE
102. BAKERSFIELD COLLEGE
103. BARSTOW COLLEGE
104. CABRILLO COLLEGE
105. CERRITOS COLLEGE
106. CHABOT COLLEGE
107. CHAFFEY COLLEGE
108. CITRUS COLLEGE
109. COALINGA COLLEGE
110. COMPTON COLLEGE
111. CONTRA COSTA COLLEGE
112. CUESTA COLLEGE
113. CYPRESS JUNIOR COLLEGE
114. DE ANZA COLLEGE
115. DESERT, COLLEGE OF THE
116. DIABLO VALLEY COLLEGE
117. EAST LOS ANGELES
118. EL CAMINO COLLEGE
119. FOOTHILL COLLEGE
120. FRESNO CITY COLLEGE
121. FULLERTON JUNIOR COLLEGE
122. GAVILAN COLLEGE
123. GLENDALE COLLEGE
124. GOLDEN WEST COLLEGE
125. GROSSMONT COLLEGE
126. HANCOCK (ALLAN) COLLEGE
127. HARTNELL COLLEGE
128. IMPERIAL VALLEY COLLEGE
129. LANEY COLLEGE
130. LASSEN JUNIOR COLLEGE
131. LONG BEACH CITY COLLEGE
132. LOS ANGELES CITY COLLEGE
133. LOS ANGELES HARBOR COLLEGE
134. LOS ANGELES PIERCE COLLEGE
135. LOS ANGELES TRADE-TECHNICAL COLLEGE
136. LOS ANGELES VALLEY COLLEGE
137. MARIN, COLLEGE OF
138. MERCED COLLEGE
139. MERRITT COLLEGE
140. MIRA COSTA COLLEGE
141. MODESTO JUNIOR COLLEGE
142. MONTEREY PENINSULA COLLEGE
143. MOORPARK COLLEGE
144. MT. SAN ANTONIO COLLEGE
145. MT. SAN JACINTO COLLEGE
146. NAPA [illegible] COLLEGE
147. OHLONE COLLEGE
148. ORANGE COAST COLLEGE
149. PALOMAR COLLEGE
150. PALO VERDE COLLEGE
151. PASADENA CITY COLLEGE
152. PORTERVILLE COLLEGE
153. REDWOODS, COLLEGE OF THE
154. REEDLEY COLLEGE
155. RIO HONDO JUNIOR COLLEGE
156. RIVERSIDE CITY COLLEGE
157. SACRAMENTO CITY COLLEGE
158. SAN BERNARDINO VALLEY COLLEGE
159. SAN DIEGO CITY COLLEGE
160. SAN DIEGO MESA COLLEGE
161. SAN FRANCISCO, CITY COLLEGE OF
162. SAN JOAQUIN DELTA COLLEGE
163. SAN JOSE CITY COLLEGE
164. SAN MATEO, COLLEGE OF
165. SANTA ANA COLLEGE
166. SANTA BARBARA CITY COLLEGE
167. SANTA MONICA CITY COLLEGE
168. SANTA ROSA JUNIOR COLLEGE
169. SEQUOIAS, COLLEGE OF THE
170. SHASTA COLLEGE
171. SIERRA COLLEGE
172. SISKIYOUS, COLLEGE OF THE
173. SOLANO COLLEGE
174. SOUTHWEST COLLEGE
175. SOUTHWESTERN COLLEGE
176. TAFT COLLEGE
177. VENTURA COLLEGE
178. VICTOR VALLEY COLLEGE
179. WEST VALLEY COLLEGE
180. YUBA COLLEGE
181. BUTTE COLLEGE

discussion only and an effort is made to present an initial examination of the potential of that area against a statewide need and the factor of the greatest service to the greatest numbers of prospective students. Chapters IV, V and VI in discussion of State College, University and Junior College facility needs respectively continues the discussion.

Commuting Distances

The foregoing in general terms suggests that most persons of the state are relatively near some public four-year colleges--either a State College or University campuses. Most are within the general vicinity of both kinds of institutions. Almost 100% of the state's citizens (some 99%) are estimated to reside in a Junior College district, and many of these persons live close to campus.

Being within the general vicinity of a college does not, of course, imply that the college is truly accessible. Commuting distance must be considered. (Other factors of accessibility such as the cost of education, including the cost of commuting, eligibility for admission, may be among the primary barriers and in fact limit accessibility. These factors are not directly the concern of this report; they have, however, been considered in part in other recent Council reports concerning financial assistance programs and programs for the disadvantaged.)[1]

Community colleges are almost exclusively commuting colleges and the California State Colleges very much so. What may be a maximum commuting distance for one person, may not be for another. Local conditions make it difficult to establish uniform **and reasonable** norms upon which to determine who is, or is not, beyond effective commuting range of a college. Motivation in great measure, as well as finances and time available, may determine what is reasonable, at least to the student, and what is not.

Recognizing the difficulties inherent in the problem an effort was made to determine the approximate number of students living outside the effective commuting range of a community college on the one hand and a State College on the other. Results are merely suggestive, as short of a census, exactitude does not appear possible.

For purposes of examining the question, it was assumed that up to 30 miles or the mileage equivalent of 45 minutes in commuting time if less distance can practically be covered in that time, was a maximum effective commuting range for most students, except that in the case of full freeway conditions it was assumed that 45 miles could be covered in the 45 minutes.

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[1] Increasing Opportunities in Higher Education for Disadvantaged Students, No. 1026, July 1966; California Higher Education and the Disadvantaged: A Status Report, No. 1032, March 1968; Financial Assistance Programs for California Colleges and University Students, 67-13, October 1967.

(For example, freeway conditions in the San Joaquin Valley allows maximum speed at all times of the day.) Using these guides, territory was identified as being within commuting ranges of individual Junior Colleges, a California freeway system map was used as the base map, and the topography of the area was examined. Results of this effort are shown in Figure III-2 and Figure III-3. (See pages III-6 and III-7.)

The commuting distance selected for the survey appears reasonable. Florida, for example, in its 1957 Master Plan set out to provide a Junior College within 30 miles of its citizens' homes.[1] A recent Texas report indicates dormitories are provided for students who must commute more than 75 miles per round trip.[2] The survey of State College students conducted in the spring 1967 disclosed the following concerning commuting distance:

Distance	Percent of Total State College Students
0-1 miles	20.09%
1-9	39.45
10-19	24.37
20-29	10.14
30-49	3.87
50 +	1.70
NR	.38

This survey would suggest that 30 miles is the outside distance that the large majority of State College students travel, though some 6% travel 30 or more miles. The survey also disclosed that the full-time student typically lives on or near the State College campus. The commuter was more often taking less than a full load. The 45-minute time limit was introduced to account for situations where highway and topographic conditions severely restrict the distance which can be covered.

Once the effective commuting areas were determined for those Junior Colleges in existence as of July 1, 1968, an effort was made to determine the number of persons residing outside the area. The survey indicated that based on the most recent population data available, some 417,000 persons live outside the commuting areas as defined in incorporated cities. To account for those persons outside the commuting range and not residing within incorporated areas, the number of persons residing in the incorporated areas was increased by 13.6%, the percentage of the population designated as rural as opposed to "urban" in the most recent federal census--this corresponds roughly to the incorporated area--unincorporated area dichotomy.[3] This results in a figure of about 485,000 persons residing outside effective commuting range of an established Junior College.

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[1] The Community Junior College in Florida's Future, Report to the State Board of Education by the Community College Council (Tallahassee, Fla.: State Department of Education, 1957). Community colleges have been established so that now it is claimed more than 99% of the state's population is within 30 mile radius of some college.

[2] Coordinating Board, Texas College and University System, A Plan for the Development of Public Service Colleges in Texas as to 1980, September 16, 1968.

[3] The large unincorporated areas often surround large population centers which in turn contain Junior Colleges and are generally within the commuting area defined.

The next step was to estimate the number of 18-24 year olds unserved geographically by Junior Colleges. As of July 1, 1968, based on statewide figures, some 52,000 of the 485,000 persons could be expected to fall within this age group. Recent data for California show that total Junior College enrollment equals some 25% of the 18-24 year old group on a statewide basis. Using this figure (and recognizing that no precise data are available regarding proportions of age groups attending college) we might then conclude that around 13,000 individuals are actual, or potential, Junior College attendees and who reside outside the effective Junior College commuting range as defined. This may be compared to a full-time enrollment in Junior Colleges of 213,496 in fall 1967 and a total enrollment of 521,695.

While the figure of 13,000 is subject to considerable qualification, it does indicate that proportionately few persons in the 18-24 year old--and primary college-going--age group are beyond effective commuting distance of an existing Junior College. (If the mileage and time guides were adjusted then, of course, different totals could result.)

Using the same methodology and noting that data show State College enrollments equal about 10% of the 18-24 year old population, we find that more than 2 million persons live outside the effective commuting range of an existing or presently proposed State College, that about 220,000 of this number are in the 18-24 year old age grouping, and that, using this figure and the established relationship between State College enrollments and the age group, we may then estimate that some 22,000 persons live beyond effective commuting distance to a State College and who are potential or actual attendees (many of these persons could attend a Junior College for their initial two years).

(Another way of looking at the problem could be to assume universal Junior College coverage and to consider only those students at the upper division as being potentially truly isolated. This approach indicated that in 1966 some 5,250 potential upper-division students resided in circumstances that were geographically isolated from State College, University or private college upper-division opportunities. To develop this total the staff used high school graduation classes in isolated areas as determined on the basis of service areas for State Colleges and other four-year institutions, and the relation of high school graduates to upper-division enrollments.)

College-Going By Area

Research supports the proposition that availability of facilities increases the numbers of persons from a given area seeking a higher education when similar facilities have not been made available previously. This appears to be especially true in respect to Junior Colleges where low cost and open admission facilitate entrance.[1] This is reflected in practices of the California Department of Finance's enrollment projection procedures, for example, where special rates are applied in estimates of Junior College enrollments when a college is beginning in a previously unserved area.

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[1] See for example James W. Trent and Leland L. Medsker, Beyond High School (Berkeley: Center for Research and Development in Higher Education, University of California at Berkeley, 1967), p. 317. The study follows some 10,000 high school graduates into higher education and vocations.

College-going, of course, is not purely a function of availability of kinds of institution. Besides factors such as motivation, sub-culture stress on the values of higher education, and socio-economic concerns, the economic configuration of the region has impact. Particular circumstances may dictate a high college-going rate or a lower one.

Though the college-going index is subject to a number of qualifications, some attention may be paid to it as one reflection of "service". Table III-1 presents comparisons by groups of counties in terms of students, undergraduate and graduate, from those counties who attend State Colleges and University campuses as compared to total county population. Table III-2 shows the first-time freshmen by county of residence as compared to the June 1967 high school graduating class.

These two comparisons indicate variation in attendance proportions among the California counties. These rates are explicable, in part, in terms of proximity to either State Colleges or University campuses. The proportion of University students is comparatively high (on both enrollment measures) from Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara-San Benito and Santa Barbara counties. Los Angeles and Orange counties fall somewhat lower as does San Diego. Most rural counties have comparatively low University attendance rates. For State Colleges the two measures show high ratings for Butte, Glenn, Humboldt-Del Norte, Fresno-Madera, San Luis Obispo, Santa Clara and San Benito, San Diego, and Sacramento-Yolo counties--all counties where State Colleges are located or are adjacent.

The composite view shows those generally rural counties with no institutions have typically low rates of attendance either at a State College or University campus. There is apparently a University "territory" in the San Francisco Bay Area in that University-going rates in the Bay Area are substantially higher than in the Los Angeles or San Diego metropolitan regions. State Colleges appear to attract students in rural areas where the colleges are located as well as in the San Diego, San Jose and Sacramento areas.

Isolated Areas

Though a large majority of California citizens now reside in areas served by one or several institutions of higher education which are within effective commuting distance from them, this is not to say the question of the "isolated" area can be disregarded. There are several policy alternatives which are open to individual Junior College boards in making available services in remote areas or to the State in respect to State Colleges.[1] These alternatives,

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[1] University facilities are located on statewide and not local considerations. Thus the problem of providing University facilities for geographically isolated individuals is not of the same degree of concern as in the case of the locally oriented Junior Colleges and the State Colleges which have traditionally viewed themselves as servicing particular regions. See Appendix G for a discussion of the costs of providing facilities for students in an isolated area.

TABLE III-1

COMPARISON OF COUNTY POPULATION AND UNIVERSITY OF CALIFORNIA AND CALIFORNIA STATE COLLEGES TOTAL FULL-TIME ENROLLMENT BY COUNTY OF ORIGIN FALL 1967

COUNTY	POPULATION (July 1, 1967)	ENROLLMENT FROM COUNTY		RATE PER 1000 IN POPULATION	
		U.C.	C.S.C.	U.C.	C.S.C.
Alameda	1,065,500	6,688	10,067	6.277	9.448
Butte & Glenn	120,500	279	2,048	2.315	16.996
Contra Costa	545,100	3,668	4,579	6.729	8.400
Fresno & Madera	465,900	998	6,190	2.142	13.286
Humboldt & Del Norte	123,900	191	2,184	1.542	17.627
Imperial	78,700	150	498	1.906	6.328
Kern	339,900	874	2,099	2.571	6.175
Lassen & Plumas	29,200	76	200	2.603	6.849
Los Angeles	7,032,400	31,861	59,492	4.531	8.460
Marin	201,200	1,383	1,849	6.874	9.190
Merced & Mariposa	116,400	207	822	1.778	7.062
Mono & Inyo	19,800	56	89	2.828	2.987
Monterey	246,100	658	1,204	2.674	4.892
Napa	77,600	289	505	3.724	6.508
Orange	1,268,900	4,297	12,651	3.386	9.970
Placer, Nevada & Sierra	103,200	309	935	2.994	9.060
Riverside	444,000	1,855	1,907	4.178	4.295
Sacramento, El Dorado & Yolo	761,100	3,573	9,246	4.695	12.148
San Bernardino	667,700	1,847	3,687	2.766	5.522
San Diego	1,283,200	3,653	16,407	2.847	12.786
San Francisco	747,500	3,355	6,757	4.488	9.039
San Joaquin, Amador & Calaveras	305,600	767	1,994	2.485	6.461
San Luis Obispo	104,300	219	1,420	2.003	13.614
San Mateo	555,400	2,831	5,260	5.110	9.49
Santa Barbara	249,800	2,086	1,355	8.350	5.42
Santa Clara & San Benito	984,700	3,832	13,793	3.892	14.001
Santa Cruz	112,700	412	692	3.655	6.140
Shasta, Tehama & Trinity	116,300	270	979	2.321	8.418
Siskiyou & Modoc	42,900	109	360	2.541	8.392
Solano	169,200	468	1,009	2.766	5.964
Sonoma, Lake & Mendocino	257,400	750	2,308	2.914	8.967
Stanislaus & Tuolumne	203,800	523	1,709	2.566	8.386
Tulare & Kings	261,200	427	1,525	1.635	5.838
Ventura	330,800	988	1,588	2.987	4.800
Yuba, Colusa & Sutter	99,700	285	747	2.859	7.492
MEAN				3.409	8.726

SOURCE: University of California, Office of Analytical Studies, Statistical Summary of Students, Fall Quarter 1967, Table X "Geographical Distribution of Students at Time of Admission." California State Colleges, Office of Institutional Research, State Department of Finance.

TABLE III-2

COMPARISON OF PUBLIC HIGH SCHOOL GRADUATES BY COUNTY AND UNIVERSITY OF CALIFORNIA AND CALIFORNIA STATE COLLEGES FIRST-TIME FRESHMEN ENROLLMENTS BY COUNTY OF ORIGIN

June 1967 Graduates; Fall 1967 Enrollments

COUNTY	NO. OF PUBLIC HIGH SCHOOL GRADS	ENROLLMENT BY COUNTY[a]		RATE PER 1000 P.H.S. GRADS	
		U.C.	C.S.C.	U.C.	C.S.C.
Alameda	13,500	1,026	993	67	76
Butte & Glenn	1,791	39	265	22	148
Contra Costa	8,637	704	470	82	54
Fresno & Madera	6,929	169	755	24	109
Humboldt & Del Norte	1,858	29	257	16	138
Imperial	1,019	27	16	27	16
Kern	4,926	146	121	30	24
Lassen & Plumas	505	5	28	10	55
Los Angeles	83,426	4,589	4,516	55	54
Marin	2,633	283	158	108	60
Merced & Mariposa	1,866	40	78	21	42
Mono & Inyo	313	6	13	19	42
Monterey	2,854	121	80	42	28
Napa	990	27	24	27	24
Orange	17,153	877	1,134	51	66
Placer, Nevada & Sierra	1,797	41	50	23	28
Riverside	5,581	303	166	54	30
Sacramento, El Dorado & Yolo	12,066	551	708	46	59
San Bernardino	9,019	321	373	36	41
San Diego	16,558	796	1,329	48	80
San Francisco	6,626	402	294	61	44
San Joaquin, Amador & Calaveras	4,265	129	152	30	36
San Luis Obispo	1,283	42	166	33	129
San Mateo	7,578	545	416	72	55
Santa Barbara	3,357	254	118	76	35
Santa Clara & San Benito	13,659	902	1,419	66	104
Santa Cruz	1,530	69	42	45	27
Shasta, Tehama & Trinity	1,730	46	81	27	47
Siskiyou & Modoc	715	17	40	24	56
Solano	2,168	91	104	44	50
Sonoma, Lake & Mendocino	3,552	110	246	31	69
Stanislaus & Tuolumne	2,953	80	78	27	26
Tulare & Kings	3,464	53	103	15	30
Ventura	4,681	177	132	38	28
Yuba, Colusa & Sutter	1,331	55	72	41	54
MEAN				41	57

SOURCE: See Table III-1

[a] Figure includes Private High School Grads, some 12,000 statewide.

or a combination, may be employed in a given situation and circumstance.

The central question in considering the problem of the student from an isolated area is to determine to what extent the overall principle (selected as controlling in this survey) will be modified which calls for the placing of facilities close to the largest concentrations of prospective students. Involved in this consideration are other questions concerning the attendant costs, both operating and capital, for smaller, less economical facilities; limited breadth of program possible in smaller institutions, and, in some instances, the difficulty in recruiting qualified staff in the most remote regions.

A balancing of individual, local and state interests are most clearly involved. No single guideline which is appropriate in all situations can be identified.

The alternative, possible courses and policy of action to provide for geographically isolated students include:

1. A decision to provide facilities and programs only when potential enrollments can justify an economically viable program.

2. A decision to provide minimal programs to minimum enrollments recognizing the high unit costs and limited breadth of offering possible, on the premise that the costs are warranted in order to provide at least some program where before none existed.

3. A program to transport students to established facilities on a day to day basis, or a residential basis. Daily bus service may be (and is in the case of some Junior Colleges) provided for students in remote areas. Residence facilities may be provided to enable students to live on campus at little or no expense to the individual.

   Related to this policy could be--

   a. Subsidy for additional costs for transportation or residential costs for those students in proven financial need.

   b. Designation of specific Junior College (or State College) campuses to receive students from remote areas. For example the state might build dormitories on certain Junior College campuses for housing students from isolated areas from throughout the state. (Some Junior Colleges now have limited dormitory facilities.) This policy, could, for example, increase enrollment in the State College at Stanislaus.

    c. Transportation subsidies such as mileage reimbursement and the like.

    d. Various combinations of the above.

4. Development of "special programs" such as off-campus centers, off-campus course offerings organized in a bloc, extension programs, etc.

    a. These programs could be linked to use of mobile library facilities; periodic residence of students on a "home" campus for short periods or a term, etc.

    b. Possibilities exist for tailoring programs to the location and its resources--*i.e.*, development of a general education curriculum offered in an isolated area which could be entered at any time, requiring minimal supporting facilities, and which could result in at least an AA degree after a certain number of courses have been taken.

    c. Correspondence courses, educational television, credit by examination, individual study are related methods of bringing the classroom to the student without requiring permanent facilities nor, for that matter, other students.

Any of these alternatives and others not listed could be employed in whole or part given a particular situation and context. As will be apparent from the discussion of the need for new facilities in local Junior College districts, individual boards are currently faced with implicit or explicit decisions as to whether or not to provide permanent facilities for geographically isolated students in areas of limited enrollment potential (and/or similarly economically isolated pockets of population).

There are, of course, many difficulties in determining which alternative policies could and should be selected. Primary among them is that there is no clearly recognized statewide policy that all students must be within commuting distance of a public institution of higher education (however that commuting distance is defined). There is an *implicit* policy, however, that the bulk of the population should be served by Junior Colleges (if not State Colleges as well). Legislative intent to encourage total Junior College districting supports this principle of universal junior college "availability" and in itself contributes to the problem of service areas of limited enrollments as noted below.

In recent years new Junior College districts have been formed of considerable geographical extent, and in some instances limited enrollment potential. Similarly, some established districts have annexed contiguous areas which are sparsely populated. Lately some colleges have expressed interest in providing Junior College programs for non-contiguous territory which in itself cannot provide sufficient enrollment for a district of its own. The Peralta (Oakland) district, for example, has recently taken into its district most of Plumas county 150 miles away. In this instance, students may be sent from the Oakland area to help support the limited programs possible in the remote area. Similarly, students may be sent from the High Sierra county to Oakland. Exchange of faculty is a possibility as well. However, as explored more fully elsewhere (Chapter VI), high unit costs and the limited curricula may temper the value of such an approach.

The district pattern for Junior Colleges, as such, can limit individuals in making a free choice of institutions which may have the program the individual desires. Establishment of a small Junior College in a district of limited population and large area necessarily dictates that the student who wishes to go to Junior College must attend the one provided in the district in which he resides even though it may mean he must live away from home as well. If the area were not in a Junior College district, the student then would have the option of attending any of the state's other Junior Colleges, most of which could offer the student (because of size) many more curricular choices. Thus, establishing more Junior College districts in sparsely settled regions may not be educationally sound.

Subsidy for students to attend institutions remote from their homes is often suggested as a method to mitigate problems students encounter from isolated areas. Using a financial need criterion much as that used in existing student aid programs, students in need in certain designated areas of the state could be provided support for residing away from their homes if they so choose.

A rough maximum cost for such a subsidy program might be estimated as an example using State College populations. Earlier it was suggested that some 22,000 potential or actual, State College enrollees may reside beyond effective commuting distance to an existing or planned State College. Assuming all of this group do in fact desire to go to a State College, and assuming that their financial need would be that of the existing State College population, and the students were not expected to make a contribution to their cost of education either through term time work or loans (summer work is included however), then the state might expect a demand for some $4 million in student support in a year's period for such persons.[1] This figure could be adjusted downward depending on the number attending a Junior College or other colleges by choice.

One further consideration may be noted, and that is the possibility of a de facto (or legal) requirement that all persons have at least two years of college. If this became the general rule, then the providing of the initial two years of college work or post-secondary terminal training would become public policy. The providing of Junior College programs as high school offerings are now provided would then be necessary. Such a requirement would have major implications for developing plans to serve students in isolated areas.

Finally, any investigation of the subject reveals that it is by no means clear whether the providing of special facilities will govern how many new students will in fact enter collegiate programs who would not have otherwise. Very likely the establishment of a new Junior College in a heretofore isolated area will attract young high school graduates and many adults as well. Presumably many of the high school graduate group will be motivated to attend college whether the facility is close at hand or not. It is much less sure in the case of adults who are less mobile and more constrained in terms of time available for attending courses. The primarily motivational, personal factors common to the groups to be served should be considered in providing any program especially one located beyond a moderate commuting distance and/or when special extension-type courses are contemplated.

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[1] Figures developed from data in CCHE, Financial Assistance for California College and University Students (67-13, October 1967). See Appendix E, Table 8. These data show a per capita State College student need of about $181.

But geographical isolation is not the only consideration.

"Urban Isolation"

Of great importance is the fact that isolation is not merely the result of natural topography and remoteness of residence to population centers. Limited public transportation effectively limits the ability of persons to attend a four-year college and even a community college in some areas such as the central Los Angeles area. The placing of colleges within the metropolitan region may have contributed to the isolation of potential groups of students. Coupled with the physical isolation of the ghetto is the need for student aids, specialized programs and the like which are necessary to overcome this "isolation".

Urban "isolation" raises the question of equity to the citizenry as a whole should special provisions in the form of facilities, aid for students, special programs and the like be made for students residing in remote areas of the state and not for those in comparatively similar need residing in metropolitan areas.

In light of these major problems, it is difficult to assure on a statewide basis true equality of geographical access to higher education facilities. To approach such equality is a goal of public higher education.

Area Interest in 1968

The Council through its Committee on Physical Facilities has endeavored to identify those areas where there is community interest in the establishment of new four-year institutions (new Junior Colleges were not included in this aspect of the investigation due to local district responsibilities).[1] Two public hearings were held to hear community expressions of interest following announcement to County Boards of Supervisors, County Superintendents of Schools, the press and to other parties known to be interested.[2]

Presentations were made to the Committee by representatives from the Redding area, on behalf of a four-year institution in their region; individuals from Kings, Tulare and Fresno Counties were heard stressing the need for a University campus; testimony was given concerning State Colleges in northern San Diego County and for an international center in the southern portion of the same county, and, in the Los Angeles area, presentations were made on the need for State Colleges in the west Los Angeles area, in Burbank, and the Sunland-Tujunga area. A presentation was also made favoring an upper-division program in downtown San Diego. (A list of persons appearing at these hearings is found in Appendix I.)

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[1] See Chapter VI for further discussion.

[2] The hearings were held on August 7, 1968, in San Francisco and on August 8, 1968, in Los Angeles.

Discussion of Proposals Presented to the Council Committee on Physical Facilities

San Joaquin Valley and Northern Sacramento Valley. The central San Joaquin area and the Redding-Red Bluff region were both given special consideration as possible locations for new University campuses in the 1964 study. The report concluded that the enrollment potential was below the minimum acceptable level for a University campus (5,000 full-time students after seven to ten years of operations) in the northern Sacramento Valley (including the Redding-Red Bluff area). It was estimated that the southern San Joaquin Valley (including the Kings-Tulare-Fresno area) could meet the minimum for a new University campus by a small margin by 1980 (assuming opening in 1970) if more than half of the enrollment could be drawn from outside the San Joaquin Valley. However, enrollment potential in each area was substantially less than that expected for new campuses in the Los Angeles and San Francisco Bay metropolitan area, thus leading to the Council recommendations.[1]

San Joaquin Valley counties which could be served by a University campus in the Fresno area-south today have a total population of some 1,643,800 persons (as of July 1, 1967).[2] The area has grown about 9% since 1960. Projections for this same region indicate a population of 1,923,000 in 1975; 2,091,500 in 1980 and 2,260,810 in 1985.[3]

In the Redding area the population base is comparatively small. Shasta and Tehama Counties would be those areas immediately served by a State College, taking into account the location of Chico State College in Butte County. These two counties alone had a population in 1967 of some 106,000. In 1975 the anticipated population will be about 132,000, in 1980, 149,000, and in 1985, 166,600.

A University campus, such as was first proposed by the communities of the area in 1964, could be expected to draw students from greater geographical area to include Shasta, Tehama, Glenn, Butte, and Colusa Counties. (Davis, located in southern Yolo County, draws students from the southern portion of the Sacramento Valley.) These counties in 1967 contained 240,100 persons. In 1975 some 281,500 are anticipated; in 1980, 309,100 and in 1985, 338,700. This total area will have less population than is expected in 1985 in Kern County (466,500), Marin (375,400) or Monterey (351,600), alone, for example.

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[1] See, CCHE, California's Needs for Additional Centers..., pp. 40-41.

[2] San Joaquin Valley is defined in terms of the Department of Finance's State Statistical area: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties. Calaveras, Tuolumne and Mariposa County populations have been added as their nearest metropolitan focal center is Fresno or Sacramento.

[3] These projections and others unless noted are those prepared by the State Department of Finance dated April 20, 1967.

San Diego County. San Diego County is one of the major metropolitan areas of California. In 1967 its estimated population was some 1,287,000 persons and in 1985 it is expected to be nearly 1,900,000 and by 1990, 2,300,000 according to San Diego County Planning Commission figures.[1] At present, the county is served by San Diego State College, the University of California at San Diego, two private institutions and six Junior Colleges. (It should be pointed out that the full impact of University of California at San Diego, a newer University campus, has yet to be felt.) The bulk of the population is located in the southwestern portion of the county surrounding the City of San Diego.

Interest has been expressed in the northern San Diego County area for a possible location for a new State College. It was suggested that a new institution could be located in the Vista-San Marcos-Escondido vicinity to serve coastal cities of Oceanside and Carlsbad as well as the communities of the interior. The "northwest" and "north central" portions would be those most accessible to such a college.[2] Population for these two regions in 1967 was estimated to be 179,990. In 1990 these two regions of the county are expected to contain 459,300 persons according to County Planning Department figures. A college located in general area of Escondido might as well serve portions of the community of Poway and Del Mar Highlands in the "Southwest fringe region". These communities today have less than 20,000 persons; however, by 1990 their population is expected to be 165,000. By 1990 a State College in the northern San Diego area could serve a population of some 600,000 to 625,000. San Diego State College at the same time might be serving a population of around 1,532,000 persons. (This same area today contains about 925,000 people.)

The proposal for a "University of the Americas" close to the border between California and Mexico originated in the San Diego Border Area Plan prepared in 1966. The immediate area of the general location for the institution is now of limited population--15,000. It would, however, serve the community of Chula Vista, the south Bay Area, Sweetwater and the southern portion of the Jamul area besides, possibly, the Tijuana region of Baja California. The present population of the California area to be served is about 120,000. In 1990 the area may be approximately 235,000 in population. Testimony presented to the Committee on Physical Facilities indicated that the border area would contain some 120,000 persons in 2000, the immediate service area some 280,000 in the same year. These population figures in part led a planning group to suggest an enrollment at an institution of some 21,000 in the year 2000.

One of the larger private institutions in the San Diego area, the University of San Diego, reports that some 60% of the institution's undergraduate enrollment comes from San Diego County. Information provided by the University indicates that some adverse effect could be anticipated on enrollment should another four-year college be established. The Very

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[1] The 1985 projection is that of the State Department of Finance, dated April 20, 1967.

[2] These and subsequent area and community designations are those used by the San Diego County Planning Department in their General Plan.

Reverend John E. Baer, President, College for Men, writes:

> The establishment of any new institution of higher learning in the San Diego area is bound to have some effect on community support for our own institution. It is difficult to estimate this impact. The specific support now received from Roman Catholic sources would probably not be decreased significantly, but the support of the general community is bound to decrease as institutions multiply. I can recognize that it is inevitable that there will be more institutions in the local area within the forseeable future. But they will certainly make it more difficult for the private colleges to survive financially.[1]

Testimony before the Committee on Physical Facilities suggested the need for downtown higher education opportunities in Central San Diego. This need is predicated on the fact that San Diego State College is located outside the central area and is not readily accessible to a number of persons, particularly those employed in the central city area. The Central San Diego area is estimated to contain about 117,000 persons (a drop from some 126,000 in 1960). The central core, however, is expected to grow to 153,000 in 1990. The National City area which could be served by a San Diego downtown center contains about 35,000 and is projected to grow to 54,000 in 1990. In mileage, these two areas are within 5 to 10 miles of San Diego State College's campus.

West Los Angeles and East Valley Areas. The proposals to provide State College facilities in the West Los Angeles area and in the so called East Valley area of metropolitan Los Angeles area (Burbank, Sunland-Tujunga, etc.) vicinity are considered together since they would provide additional service to population centers now served by other public, four-year collegiate institutions, but some distance away in commuting time.

1. West Los Angeles. The population to be served is perhaps best identified in the case of the West Los Angeles City region. This region is generally considered to be west of the Harbor Freeway and bounded by the Santa Monica mountains and Imperial Highway. It includes Santa Monica, Culver City, Inglewood, West Los Angeles, Beverly Hills, the Los Angeles Airport vicinity, Baldwin Hills, Hollywood, etc.

Within the area is currently U.C.L.A., Loyola University, University of Southern California, Pepperdine College, Los Angeles City College, Santa Monica City College, and a planned Junior College in Culver City. Other Junior Colleges are located near the area as defined.

The West Los Angeles area proposal has been suggested because Los Angeles State College and San Fernando State College are considerable distances away via crowded freeways. California State College at Dominguez Hills is similarly remote. (It may be noted that the Master Plan in 1960 recommended the establishment of a new State College in the vicinity of the Los Angeles International Airport, Dominguez Hills, which is this college, is located to the southeast of the airport. A location to the north of the airport would have served the Culver City-Santa Monica area to a greater degree.

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[1] Letter to Director Owen A. Knorr, October 28, 1968.

The West Los Angeles area as defined above is estimated by the Los Angeles Regional Planning Commission to contain some 1,559,000 persons at the present[1] and in 1975, 1,718,000; in 1980, 1,817,000 and in 1985, 1,870,000. In the period 1968 through 1985, therefore, the West Los Angeles area will grow by about 300,000 persons. This growth, though substantial, indicates that any justification for a new State College in the West Los Angeles area rests upon existing population and whether or not residents of the area can be expected to attend California State College at Los Angeles, San Fernando Valley State College and the new California State College, Dominguez Hills and whether there is at present sufficient physical capacity for them.

Establishment of a State College in the West Los Angeles area could have some impact on the private institutions in the area. In response to questions posed by the Council staff, Pepperdine College indicated that some 44% of its enrollment came from the area and that should a new institution be established recruitment from a wider area would be necessary. The College also indicated:

> We plan to enlarge our upper division and graduate level work. Today we are serving more students at this level than on the lower division level. The junior colleges are offering work so near the homes of students that we see our area of service shifting to upper division. Should a state college be established and offer this work, we hardly see how we could compete as a private institution which must charge for tuition.[2]

Loyola University of Los Angeles reports that some 60% of the University's undergraduate students come from the area. (Marymount College now located on the Loyola campus draws 45% of its 450 students from the area.) Loyola does not believe that establishment of a State College in the area would initially reduce community support. However, Father Charles Casassa, President, states in response to questions posed by the Council staff:

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[1] April 1, 1968, estimate of the County of Los Angeles, Regional Planning Commission. The West Los Angeles area is assumed to include the following Statistical areas: 20,3,15,35,1,30,16,31 less the populations of the cities of Hermosa Beach, Manhattan Beach, Redondo Beach, El Segundo in area 31 and Gardena, Hawthorne and Lawndale in 16. This area corresponds roughly to the boundaries mentioned in the text. Projections for 1975, 1980 and 1985 were as revised in August 1966. See: Population of Los Angeles County, 1965-1985, Regional Planning Commission, Special Report 67-1, February 1967, and the Commission, Quarterly Bulletin; Population and Dwelling Units, 100 (April 1, 1968).

[2] Letter to Owen A. Knorr from James C. Moore, Jr., Vice President--Planning, October 9, 1968.

> To some extent the establishment of an uppper-division college with limited initial graduate work would be preferable to a four-year undergraduate state college. Such an arrangement would certainly be preferable as far as our lower-division work is concerned. On the other hand we believe that the future will see many private colleges getting more junior college transfers than at present, with perhaps some decline in the rate of growth in the lower division. We think that this may be the case because of the rising tuition rates in the private colleges. In connection with this particular question I wonder whether it is generally known that the Los Angeles Junior College System is planning a new junior college just a few miles from us. I am sure that this junior college will have some impact on our enrollment, and I wonder whether it would not also take care of a great deal of whatever problem may exist in the area in question.
>
> A new state college in our area would have some influence on our enrollment. It might also have some influence on our Teacher Training programs since we are involved with several public high schools in the area. If the impact on enrollment turned out to be severe this would certainly affect the quality of education which we would be able to offer since quality, in my judgment, is tied to some extent to quantity. A certain base of students is required to support academic programs on a good level.[1]

2. East Valley. The Burbank and East San Fernando Valley area was considered for the location of a new State College in the 1964 study in response to legislative and community interest as well as the Master Plan recommendation which stated that: "in 1965 and again in 1970, if applicable, and before considering the need for new State Colleges in any other areas of the state, careful studies be made by the co-ordinating agency of the . . . Los Angeles-Long Beach Metropolitan Area, Griffith Park-Glendale vicinity." Burbank is adjacent to this immediate area designation.

The 1964 report did not recommend a college for this area noting that the communities involved were served by a variety of institutions relatively close at hand. The report in its text did indicate that the whole of the Los Angeles area including the Glendale-Griffith Park portion should be studied in the next report of the Council.

The Burbank-East Valley area does not presently contain any four-year public institutions. Occidental College, a private institution, is located in Glendale. Valley College and Glendale College are Junior Colleges within the immediate vicinity. San Fernando Valley State College and California State College at Los Angeles are within 20-30 minutes driving time via freeway from most portions of the area, though the Sunland-Tujunga area is more remote from the latter. The Sunland-Tujunga area, because of topography, is comparatively separated from the Los Angeles Basin as well as the San Fernando Valley. The valley area including the communities of Sunland, Tujunga, La Crescenta, Montrose and La Canada contains some 75,000 people. The area is restricted in growth situated as it is in the valley between the Verdugo Hills and the San Gabriel Mountains.

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[1] Letter to Owen A. Knorr from Father Charles S. Casassa, President, Loyola University of Los Angeles, October 25, 1968.

The East Valley including Glendale, Burbank, and the Tujunga areas includes some 611,363 persons today.[1] In 1975 the area is expected to grow to about 697,000 and to some 760,000 in 1980 and to 790,000 in 1985.

As noted, Occidental College, a private, four-year liberal arts institution is located in the area suggested. In fall 1968, communities in the immediate vicinity provided about one-eighth of Occidental's total enrollment. President Gilman has reported:

> So far as we can determine, and to the extent that predictions are at all reliable, we do not feel that the establishment of a state college in the Burbank-Glendale area would have any significant negative impact on Occidental College.
>
> We do not, as a matter of fact, draw very heavily for students from this particular area, and we do not feel that the existence of a nearby state college would be any serious handicap to us as far as student recruitment is concerned.
>
> * * *
>
> . . . It might well be that the existence of a state college nearby might open up opportunities for coordinate programs or other forms of inter-institutional cooperation. This might be especially relevant in limited graduate areas or in the area of teacher preparation.[2]

Specialized Facilities and Meeting Area Needs: San Joaquin Valley

Certain kinds of specialized facilities may be proposed in lieu of, or as an initial increment for, new institutions of higher education. Such a facility was proposed in the context of the 1964 study of the Council: in this instance, a University-operated medical and agricultural center in the Fresno area. This proposal, seen as a possible first step before eventual establishment of a University campus in the central San Joaquin Valley, was studied by a special Council-sponsored committee with emphasis on possible cooperative arrangements between Fresno State College and the University.[1]

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[1] Statistical areas 2, 4, 14, 24, and 33.

[2] Letter to Owen A. Knorr from Richard C. Gilman, President, October 21, 1968.

The need for the specialized programs of the nature proposed as well as possible joint development of a graduate center in the agricultural and health sciences was explored by the Committee which included the Council members and system board members. To date the need for such a center has not been made clear, nor does there appear to be a significant commonality of interest and focus to contemplate a joint-sponsored graduate center as yet.

Results of the specialized center discussions over the past four years indicate the complexity in the establishment of specialized centers especially when they do not clearly meet the demands for higher education services of large numbers of individuals. Cooperative efforts appear to be elusive of definition and their need (in this context) not well-established.

Summary

The foregoing material may be summarized in the following observations:

1. Though past studies have analyzed aspects of the need for higher education facilities in terms of certain defined regions, the present juxtaposition and number of two and four-year colleges make such an approach unproductive for this present review. However, other service-oriented measures may be noted as relevant to the total need of the state for additional centers.

2. Most individuals are located within effective commuting range of either a public Junior College or an existing (or presently proposed) California State College. University campuses, traditionally viewed as statewide institutions, are located adjacent to or within all major

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[1] Following adoption of the 1964 Council report, on January 14, 1965, the President of the University forwarded a proposal to the Council suggesting a University Graduate Center in the San Joaquin Valley with emphasis on agricultural sciences and the health sciences. A Graduate School in the Agricultural Sciences, a Regional Section of the Agricultural Experiment Station and a Regional Office of the Agricultural Extension service were proposed as part of the center. The health sciences aspect of the center was to include a medical school, a health center focusing on health problems and services, and ultimately a dental school. This specific proposal was later withdrawn by then President Clark Kerr.

Review of the University of California "Growth Plan" in 1967 disclosed that a University campus for the San Joaquin Valley was proposed without a specific opening date. The Council then established a Special Committee to consider: (1.) the need for a facility in the San Joaquin Valley in the fields of health sciences and agriculture and (2.) if the need exists, the feasibility and desirability of a cooperative endeavor in the development of a health sciences facility and an agricultural facility supported and operated by the University of California and the California State College, _i.e._ Fresno State College.

This Committee met and considered the possibilities for cooperative programs. It later was disbanded and the question referred to the Committee on Physical Facilities of the Council.

metropolitan regions save that of the central San Joaquin Valley.

3. College-going rates vary significantly by area and evidence indicates they increase most markedly with the establishment of Junior College programs. Counties with State Colleges located in them or adjacent to them show relatively higher rates of attendance than do counties without such facilities. The pattern of University attendance varies throughout the state with the San Francisco Bay Area showing typically higher proportions of students going on to a University campus than do other areas. A number of factors other than location of facilities enters into the college-going decision especially when a baccalaureate degree or higher is the objective.

4. Geographically isolated areas may be served by establishing new, small institutions, providing off-campus centers and other similar programs or by transporting students to existing facilities perhaps with a subsidy for those required to live away from home and who are in financial need. A problem of equity may be pointed out in that isolation may exist in urban areas to an equal or greater degree for substantial numbers of persons.

5. Interest has been expressed in the location of new institutions in San Diego county, the Los Angeles metropolitan area, the central San Joaquin Valley and the Northern Sacramento Valley. Each situation has certain aspects about it to make uniform treatment inadvisable. Institutional capacities and availability of transportation are important factors in considering the need for new centers in the metropolitan areas now served by other institutions. The projected population to be served and community support are important in the less populated areas not fully served by all types of higher education institutions.

6. Studies and discussions conducted since 1964 have not resulted in a clear indication of the value in establishing at this time a specialized University of California center in graduate health and agricultural sciences to be located in the vicinity of Fresno in the central San Joaquin Valley. Similarly, cooperative action between the University and Fresno State College, though continuing to be a major possibility, does not modify the finding that no persuasive evidence has been presented to indicate the need for a center, irrespective of its sponsorship.

CHAPTER IV

CALIFORNIA STATE COLLEGES

Enrollment Trends in the State Colleges

The California State Colleges have more than doubled their enrollment since 1960. In 1960-61 the then fifteen colleges enrolled some 59,000 students; in 1967-68, the present eighteen college system had an enrollment of 125,200 students.[1]

However, rapid growth has not been the case at each college in the State College system. As would be expected, those institutions located in the more populous urban areas have experienced the greatest growth. Average yearly growth has ranged from a low of 80 students per year at Stanislaus State College to a high of 1,080 students per year at San Fernando State College. The mean yearly growth for each college has been 546 students per year, or a 6.6% average yearly increase.

Current enrollment projections shown in Table IV-1 indicate that the nineteen State Colleges (Bakersfield is planned to begin admitting students in 1970-71) will again double their enrollments by the year 1977-78, reaching a total of 247,260 F.T.E. students.[2] The mean annual growth for the State College system during the regular academic year is expected to increase only slightly over that observed during the years 1960-67, from 9831 to 9936 F.T.E. students per year. Annual growth for each college is projected to average 523 F.T.E. students or a 5.7% average yearly increase--slightly lower than during the 1960-67 period.

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[1] The enrollment count noted here and henceforth in this section, unless otherwise noted, will be in terms of "annual full-time equivalent enrollment" during the daytime (8:00 a.m. - 5:00 p.m.). This figure is used for determining the need for capacity of instructional facilities.

In 1960, "annual full-time equivalent enrollment" equated to total enrollment for the academic year, was less those students enrolled in the self-supporting summer session. Beginning with the inauguration of year-round operations, the annual full-time equivalent enrollment figure was separated into two components: those students in attendance during the regular academic year (two semesters or three quarters) and those who would have enrolled during the regular academic year but who are now in attendance during the summer quarter of year-round operations. Summer quarter enrollments are "annualized" (by dividing by three) to make them equivalent to the academic year, annual full-time equivalent enrollment. Total enrollment for the period of projection--1968-69 through 1977-78--therefore, is the sum of annual full-time equivalent enrollment during the regular academic term plus the annual full-time equivalent enrollment in the summer quarter of those students who would have previously enrolled during the regular academic year prior to the inauguration of year-round operations.

[2] Department of Finance projections have been converted from fall-term, full-time "demand" projections to the annual F.T.E. (8-5) unit used by the State Colleges for planning purposes. A similar conversion is made for University purposes. See Chapter V for further discussion.

TABLE IV-1

PROJECTED ANNUAL FULL-TIME EQUIVALENT STUDENT DEMAND, 8 AM - 5 PM
(INCLUDING SUMMER QUARTER INCREMENTS)
CALIFORNIA STATE COLLEGES, 1968-69 to 1977-78*

College	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Bakersfield	--	--	360	560	800	990	1230	1580	1950	2330
Chico	6770	7120	7650	8070	8640	9240	9820	10430	11080	11730
Dominguez Hills	730	1340	2010	2660	3790	4600	5420	6220	7040	7860
Fresno	8350	8560	8930	9410	9880	10410	11050	11600	12130	12740
Fullerton	6110	6930	7740	8520	9420	10330	11230	11760	13030	13920
Hayward	6330	7240	8270	9340	10410	11550	12660	13810	14920	16080
Humboldt	3620	3800	4200	4510	4815	5150	5480	5850	6160	6510
Kellogg-Voorhis	6150	6450	6850	7320	7730	8220	8680	9150	9620	10090
Long Beach	14020	14860	15420	15950	16590	17190	17940	18350	18930	19420
Los Angeles	11750	12400	13310	14010	14830	15680	16490	17330	18140	19100
Sacramento	8370	8860	9530	10060	10620	11180	11740	13420	15240	15070
San Bernardino	1070	1510	1980	2470	2990	3630	4210	4790	5310	5890
San Diego	15050	16020	16820	17970	19070	20100	20480	22455	23680	25195
San Fernando Valley	11420	12210	13250	14010	15090	16230	17320	18480	19620	20690
San Francisco	11880	11880	12280	14020	14910	15800	16680	17560	18450	19030
San Jose	15740	16260	16730	17050	19375	19990	20595	21210	21815	22430
San Luis Obispo	9000	9510	10040	10530	11050	11560	12070	12570	13080	13640
Sonoma	1940	2280	2620	3000	3430	3890	4210	4640	5000	5340
Stanislaus	950	1120	1310	1520	1700	1880	2130	2390	2640	2870
Less Those Redirected to Other Colleges*	--	--	--	- 50	-325	-870	-925	-1485	-2125	-2675
TOTAL	139250	148350	159300	170930	184815	196750	208510	222110	235710	247260

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*This table shows the projected growth of all colleges based on Trustees' office figures except that the Council staff has projected those colleges reaching maximum planned enrollment ceilings beyond those currently planned. For example San Diego's ceiling is 20,000. The table projects enrollments beyond that point from 1973-74 on. The concluding line of the table represents numbers of students redirected in the State College calculations from topped-out campuses and which must be subtracted from the gross total since the Council staff has instead added enrollments to topped-out institutions for discussion purposes.

Again, these projections indicate that the numbers of students enrolling in the State Colleges at all levels will greatly increase though the number of high school graduates is projected to increase by only 38% from 1968 through 1977. However, as shown in Chapter II, the number of individuals in the 18-24 year age group will begin to decline in 1983 and will continue to do so until 1990. Therefore, if participation and persistence rates do not increase the State College enrollments projected from the 18-24 year old group for the late 1970's or early 1980's may represent a peak. A leveling off or actual decline in the 1980's may then occur.

Maximum Planned Enrollment Ceilings. In order to plan effectively the physical plant development required for projected enrollment, the Trustees of the California State Colleges have established maximum planned enrollment ceilings at each of the State Colleges. Since the primary factors in setting these ceilings are expected demand and the limitations of the physical site, they may be revised upward--or downward--as sufficient evidence warrants. The enrollment ceiling currently established for each of the State Colleges for the regular academic year and the 1977-78 summer quarter is shown below:

TABLE IV-2

CURRENTLY PLANNED ENROLLMENT CEILINGS - CALIFORNIA STATE COLLEGES

College	Maximum Planned Enrollment Ceiling Regular Academic Year[a]	Summer Quarter Increment 1977-78 [b]	Maximum Planned Enrollment Ceiling[c]
Bakersfield	12,000	160	12,160
Chico	10,000	560	10,560
Dominguez Hills	20,000	720	20,720
Fresno	20,000	610	20,610
Fullerton	20,000	1,080	21,080
Hayward	15,000	1,560	16,560
Humboldt	5,000	420	5,420
Kellogg-Voorhis	20,000	980	20,980
Long Beach	20,000	1,380	21,380
Los Angeles	16,800	2,780	19,580
Sacramento	20,000	1,640	21,640
San Bernardino	20,000	470	20,470
San Diego	20,000	1,300	21,300
San Fernando Valley	20,000	1,010	21,010
San Francisco	16,000	3,080	19,080
San Jose	17,000	2,880	19,880
San Luis Obispo	12,000	860	12,860
Sonoma	12,000	130	12,130
Stanislaus	12,000	80	12,080
Total	307,800	21,700	329,500

[a] Annual average full-time equivalents (8 AM - 5 PM)

[b] Summer Quarter FTE converted to annual average FTE students. This summer quarter FTE count are those students who would have enrolled during the regular academic year prior to inauguration of year-round operations.

[c] Regular academic year plus summer quarter increment at 1977-78 level.

It should be stressed at this point that the maximum enrollment ceilings for the regular academic year noted above are those currently planned. To reach individual campus ceilings, capital outlay funds must be made available for any additional facilities required to provide space for student enrollments. It should also be noted that the year in which maximum ceilings will be reached by individual colleges will vary depending upon enrollment demand.

Enrollment Demand Versus Currently Planned Enrollment Ceilings

A comparison of the 1977-78 enrollment demand projected for the California State Colleges--247,260--and the currently planned enrollment ceilings (including the summer quarter increments)--329,500--shows that for all State Colleges combined, the maximum planned capacity in the existing State Colleges exceeds the enrollment demand by more than 80,000. Individual college projections in Table IV-1, however, indicate that prior to 1977-78, the five State Colleges listed below will exceed their maximum planned enrollment ceilings.

TABLE IV-3

ENROLLMENT DEMAND VERSUS CURRENT MAXIMUM PLANNED ENROLLMENT CEILINGS

College	Projected Student Demand[a]	Current Planned Enrollment Ceiling[b]	Top-Out Year
San Jose	22,430	19,880	1971-72
San Diego	25,195	21,300	1973-74
Humboldt	6,510	5,420	1974-75
Chico	11,730	10,560	1975-76
San Luis Obispo	13,640	12,860	1976-77

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[a] From Table IV-1
[b] From Table IV-2

Assuming these ceilings and anticipated growth of other colleges there is an unallocated projected enrollment "demand" of some 7000 F.T.E. students in 1977-78 that will have to be accommodated in some way by the State College system.

Options Available to Meet Excess Student Demand

The State Colleges have five major options available to provide in whole, or in part, for the accommodation of excess enrollment demand on the topped-out campuses. They are: 1) redirection of students, 2) year-round operations, 3) greater utilization of facilities during evening hours and on

Saturdays, 4) increasing maximum planned enrollment ceilings at topping-out campuses and 5) the authorization of new State Colleges. These options are considered below.

Redirection. If students for whom there were no space could be redirected from those State Colleges where enrollment ceilings have been reached to those campuses where facilities are available (or can be constructed) there would be no need at this time to consider either an increase in the ceilings of topped-out campuses or the establishment of new campuses.

It is the present policy of the State Colleges that any student redirection be determined by individual colleges working within the framework of enrollment ceilings determined by the Trustees of the State Colleges. Presumably greater central direction would be needed to carry out a comprehensive redirection program.

In most State Colleges the students to which the college gives service are largely from an area close to the college. In 1960, approximately 80% (on the average) of the total enrollment at each State College came from the immediate area of the college. Since 1960, however, this average percentage has decreased slightly to 77%. Those students who persist to graduation from the State College system are more mobile than one would first expect. In an unpublished draft report prepared by the Division of Institutional Research of the California State Colleges the following statement is made: "Although the State College system serves California residents almost exclusively, students do not necessarily graduate from a State College in proximity to their high school. The preponderance of graduates (57%) graduate from a non-proximate college."[1]

Certain State Colleges might now be described as statewide institutions. For example, the State Colleges at Chico, Humboldt and San Luis Obispo derive less than 50% of their total enrollment from the enrollment area within which each college is located.[2]

Generally speaking, a State College serves a greater proportion of students from its area of location when it is a relatively new college located in an urban center. Conversely, an older college located in rural or isolated area serves a community of students drawn more on a statewide basis. If present trends continue and student mobility continues to increase, by 1977 most State Colleges can be expected to become more statewide in character. Nevertheless, in applying this option of student redirection this study assumes that through the year 1977-78, the average State College will draw at least 50% of its total enrollment from the area in which it is located.

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[1] Those Who Made It: Selected Characteristics of the June 1967 California State College Baccalaureate Graduates, The Division of Institutional Research, The California State Colleges - Office of the Chancellor, p. 17.

[2] Enrollment Trends and Growth Rates in the California State Colleges Office of the Chancellor, Division of Institutional Research, March, 1968.

Year-Round Operations. A second option, the greater development of year-round operations, could increase the capability of the State Colleges to provide for increased enrollments. If under year-round operation, completely balanced enrollment could be obtained during each term of the year including the summer term, current enrollment ceilings at each of the topped-out campuses could be increased by one-third with only a small corresponding increase in facilities. Short of completely balanced enrollment, however, substantial increases in enrollment ceilings are possible. If summer quarter enrollment at a college on year-round operation reaches a level of 40-50% of the three-term average of the regular academic year, the maximum planned enrollment ceiling, in effect, is increased by 13.3% or 16.6%, respectively. Further, a more balanced enrollment should evolve as a college nears its enrollment ceiling since student demand upon limited facilities become greater.

The anticipated reduction in capital expenditure, through the year-round use of facilities was recently confirmed by the consulting firm of Touche, Ross, Bailey and Smart, in their report to the Council on October 7, 1968. It should be noted, however, that this study found that installation of year-round operation should occur only after intensive cost-benefit analysis of each college situation. Furthermore, some colleges project substantial summer terms already and therefore may have little room for further application of the option.

Extension of Instruction of Evenings and Saturday. A third option for the accommodation of enrollment growth beyond planned enrollment ceilings is increased use of existing facilities through the scheduling of a greater number of classes during the 5-10 p.m. evening hours on Monday through Friday and the 8-12 morning hours on Saturday.

At present the maximum planned enrollment ceiling of a State College is based upon the use of facilities from 8 a.m. to 5 p.m., Monday through Friday, or for 45 hours. Theoretically by the use of the additional 29 evening and Saturday hours (morning only), as suggested above, some 29/45 or 64.4% more F.T.E. students could be accommodated. All State Colleges currently use these evening hours to some extent to accommodate their evening F.T.E. enrollments. However, the extent of usage is generally small. In the fall term 1966 for the entire State College system the F.T.E. students accommodated in the 5-10 p.m. evening hours was 14.6% of the F.T.E. students accommodated in the regular 8-5 time period. Similar percentages for the individual colleges varied from a high of a little more than 25% to a low of almost zero.[1]

The 1966 figures and present policies would indicate that more students could be accommodated through the implementation of this option.

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[1] Enrollment Trends and Growth Rates in the California State Colleges, Office of the Chancellor, Division of Institutional Research, March 1968.

Increasing Maximum Planned Enrollment Ceilings or Establishing New Colleges. A major consideration in determining whether to implement increasing the planned enrollment ceilings at the State Colleges which have been projected to top-out or to establish new colleges to meet the projected excess student demand is the relationship of unit costs of both capital construction and operating expenditures attributable to each option.

The Council staff sought to determine the relationship of unit costs on enrollment levels and growth rates (see Appendix D-1). The examination indicated that economies-of-scale in reducing capital costs are more evident as a college increases in size from 2,000 to 4,000 enrollment, than are the cost reductions when size increases from 12,000 to 14,000. Further, based on historical data, it appears that it is approximately one-half again as expensive to construct facilities for each F.T.E. student at a new college as it would be to construct facilities for this student at a college with a present enrollment of some 14,000 students. The data of Appendix D-1 also reveal that an average annual growth rate of at least 350 F.T.E. students is required to obtain maximum economies in construction costs per F.T.E. student.

An even more important consideration in increasing maximum planned enrollment ceilings are economies-of-scale with respect to operating costs, for whereas capital costs are "one-time" costs, operating costs continue. If economies-of-scale with respect to both size and growth are evident for operating costs, even greater economies would result when size and growth were increased to a maximum. Council staff findings with respect to this relationship (see Appendix D-1) indicate that there are economies-of-scale for enrollments ranging up to 16,446 and there is no indication as to when diseconomies-of-scale will ultimately result. It is evident that the maximum planned capacity of the State College system as a whole is more than sufficient to care for the enrollment projected for 1977-78. This would, however, imply redirection of students from colleges without additional capacity to those with excess capacity without regard to the location of college and student. Furthermore facilities would need to be constructed in some instances earlier than might otherwise be the case.

Accommodation of Enrollments Greater Than Planned Ceilings

With the above in mind the following examines each of the five State Colleges which is projected to surpass its current enrollment ceiling and analyzes the effect of the implementation of the various options or combinations thereof toward meeting estimated excess student demand.

Table IV-4 shows the year-by-year build-up of excess student demand by college for the five State Colleges once each college is projected to surpass its current enrollment ceiling.

TABLE IV-4

PROJECTION THROUGH 1977-78 OF EXCESS STUDENT DEMAND CAUSED BY TOPPING-OUT OF COLLEGE

Year	San Jose	San Diego	Humboldt	Chico	San Luis Obispo	Total
1971-72	50	--	--	--	--	50
1972-73	325	--	--	--	--	325
1973-74	770	100	--	--	--	870
1974-75	1,215	480	180	--	--	1,875
1975-76	1,660	1,525	510	30	--	3,725
1976-77	2,105	2,560	780	600	260	6,305
1977-78	2,550	3,895	1,090	1,170	780	9,485

The table shows, for example, that San Jose State College is projected to surpass its current enrollment ceiling in 1971-72 resulting in an excess student demand of 2,550 students by 1977-78.[1]

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[1] A note of explanation regarding the yearly projected excess student demand projected in Table IV-4 above and those showing total yearly demand in Table IV-1 is necessary since they are not in agreement--a differential of some 50 students in 1971 to some 2675 students in 1977-78. The Chancellor's Office supplied projections by college through the year 1977-78. However, the Office did not disaggregate the excess student demand that would be generated by each particular college after surpassing its present enrollment ceiling. The Council staff allocated excess demand back to the individual colleges year by year on the basis of historical and projected growth rates of each State College. This method of projection does somewhat overstate the excess student demand by college since it does not consider the free choice of individual students to redirect themselves to other colleges once a particular State College surpasses its current enrollment ceiling, nor for that matter, the effects of redirection policies imposed by the State Colleges. As a result, no students were allocated to other campuses. Therefore, in reviewing the application of the various policy options to each of the five State Colleges below, we are being conservative since these options are applied to a total excess student demand of 9,485 students by 1977-78 whereas the Chancellor's Office has projected this demand to be only 6,810 students for this same year.

San Jose State College. San Jose State College is projected to be the first State College to exceed its current maximum planned enrollment ceiling. This will occur in 1971-72. By 1977-78, the projected excess student demand will total 2,550 F.T.E. students. The accommodation of this demand by use of each of the proposed options or a combination is discussed below.

Redirection. San Jose might be considered one of the four State Colleges which services enrollment on a statewide basis. In 1967 32% of San Jose State's enrollment came from outside Santa Clara County. Of this total, approximately 17% of the student body came from counties of origin nearer to other State Colleges than to San Jose State; these State Colleges are projected to have facilities available through the year 1977-78.[1] If one could assume that the participation rates observed in 1967 would continue throughout the period of projection, then centralized admissions would have the maximum potential of redirecting approximately 3,800 of the 22,430 projected total student demand at San Jose State during 1977-78--or 1,250 F.T.E. more than projected demand in 1977-78.

Year-Round Operations. Even though San Jose is projected to surpass its current enrollment ceiling by 1971-72, year-round operation is presently not planned to be initiated until the following year. Current projections for San Jose indicate there will be an enrollment during the summer quarter 1977-78 equal to approximately 51% of the regular academic year enrollment. To accommodate the total projected student demand, a summer quarter enrollment nearing 96% of the average regular academic year would have to be obtained during the summer quarter.

Extension of Instruction to Evenings and Saturdays. San Jose State for the fall of 1966 was utilizing its "extended use facilities" during the evening hours (5 p.m. - 10 p.m.) and the four hours available for Saturday use (8 a.m. - 12 Noon) at a rate of 22.8% of full use for the total possible hours available.[2] With maximum utilization of this option, San Jose could increase its current enrollment ceiling to 27,948 F.T.E. students, or have facilities available for an additional 5,518 students over that of providing for total student demand through the year 1977-78. To meet total student demand through the year 1977-78, an increase in the use of facilities in evening and on Saturday to accommodate the excess 22.8% demand of 2,550 F.T.E. students would require an increase from the present rate to a rate of 46%.

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[1] This list of counties and their percent participation is as follows: Fresno - 0.4, Humboldt - 0.2, Kern - 0.9, Los Angeles - 5.6, Mendocino - 0.2, Merced - 0.3, Napa - 0.3, Orange - 1.1, Placer - 0.2, Riverside - 0.4, Sacramento - 1.0 San Bernardino - 0.6, San Diego - 0.6, San Joaquin - 1.2, San Luis Obispo - 0.3, Santa Barbara - 0.8, Shasta - 0.2, Siskiyous - 0.1, Sonoma - 0.7, Stanislaus - 0.6, Tulare - 0.4, Ventura - 0.5, Yolo - 0.1 and Yuba - 0.1.

[2] "Extended use Capacity" equals 29/45 or 64.4% of the current enrollment or enrollment ceiling (8 a.m. - 5 p.m.).

Increasing the Enrollment Ceiling. The present campus site consists of 131 acres of level terrain. An additional seven acres is available to meet the current enrollment ceiling. The Chancellor's office has indicated that additional land adjacent to the campus is available for increasing the present enrollment ceiling; however, this land is currently being highly utilized by private commercial and residential interests. It is of interest to point out that the observed capital cost per student of $7,356 (Appendix D - 1) is higher than would be expected for the current campus size--possibly due in part to the fact that recently the campus geographic boundaries were extended by purchase of land which was highly developed by private residential and commercial facilities. In other words, this may be an instance where the economies of increasing scale are more than offset by the cost of site development of already highly utilized land.

The Addition of a New College. The 1964 Council survey found that a "definite ultimate need" existed for two new State Colleges in the San Francisco Bay Area--one in Contra Costa County and the other in the San Mateo-Santa Clara County area--and that authorization for the establishment of one of these could be recommended by 1969. Advance site acquisition was recommended and has gone forward in both areas.

Though a "definite ultimate need" for additional State Colleges in the San Francisco Bay Area continues to exist, the actual opening of these colleges need not be prior to 1977-78. The excess student demand projected through the year 1977-78 at San Jose State College may be met by one or a combination of options discussed above. Other colleges do not top-out in the area until after 1977-78. (Appendix D-3 includes discussion of the options in terms of possible demand in 1980-81.)

San Diego State College. As shown in Table IV-3, San Diego State College is projected to exceed its planned maximum enrollment ceiling by 1973-74, and could have a projected enrollment of some 3,895 F.T.E. students beyond this ceiling by 1977-78. The possible accommodation of these students through the implementation of one or more of the policy options is considered below.

Redirection. County participation rates for 1967 for San Diego State College show that while 80% of the in-state enrollment resided in the San Diego area, a little over 15% of the 1967 enrollment had residence in the Los Angeles area, 2% had residence in the San Francisco Bay Area, and 3% had residence elsewhere in the state. Since the Los Angeles area will have planned maximum enrollment capacity in 1977-78 well beyond projected enrollments, it would appear that a large part of the excess enrollment projected for San Diego State for 1977-78 could potentially be redirected to, and accommodated in, the Los Angeles area. If the 1967 participation rates persist, some 3,779 of the 1977-78 enrollment would be residents of the Los Angeles area--a number almost equal to the 3,895 students who will need to be accommodated.

Year-Round Operation. As pointed out above, San Diego State College is projected to exceed its current enrollment ceiling in 1973-74 and by 1977-78 could have the largest potential excess student demand of any other State College--3,895 F.T.E. students. Though present enrollment limits will be met in 1973-74, San Diego is not planning to inagurate year-round operations until 1975-76. By 1977-78, summer quarter enrollment is projected to be only 20% of the fall term enrollment. If this rate were raised to 58%, only slightly higher than the rate projected and planned for San Jose State, 57% , the excess enrollment projected through 1977-78 for San Diego State could be accommodated through this action by itself.

Extension of Instruction to Evenings and Saturdays. Previous consideration of this option indicated that the use of facilities in the evening and Saturday morning hours could, potentially, provide for an enrollment some 64.4% greater than that accommodated during the regular 45 hour week. In the fall term 1966, San Diego State was already using the evening hours to accommodate an enrollment equal to 19.3% of the "extended use capacity." With maximum utilization of this option, San Diego could increase its current enrollment ceiling to 32,880 F.T.E. students, or have facilities available for an additional 7685 F.T.E. students, through the year 1977-78 over that of providing for total student demand. The accommodation of the excess enrollment projected for San Diego in 1977-78 would require that F.T.E. enrollment in extended use in evenings and on Saturday increase from the present 19.3% to approximately 49%.

Increasing Enrollment Ceiling. The present campus comprises 268 acres in an area of mesas and canyons. An additional ten acres is available to meet the current enrollment ceiling, with additional acreage available to expand. Access and traffic problems could, however, limit this expansion.

The Addition of a New College. It would appear that the complete or partial implementation of some combination of the options discussed above could accommodate the excess enrollment projected for San Diego in 1977-78, and, therefore, consideration need not be given to the addition of a new college in the San Diego area to accommodate the 1977-78 projected enrollment.

Further, since 1977-78 projected enrollment for San Diego are status quo projections, the effect of the growth of University of California at San Diego upon these projections is currently unknown.

Chico State College. Chico State College is expected to surpass its current enrollment ceiling in 1975-76. The excess enrollment projected for the college in 1977-78 will total 1,170 students.

Redirection. In 1967, 23% of the enrollment at Chico had residence in the county (Butte) in which Chico is located, and a somewhat higher percentage, 25%, had residence in counties in the San Francisco Bay Area. The remaining 50% are largely residents of counties in areas of the state where State College enrollment ceilings will not be exceeded in 1977-78. The use of the option of redirection could therefore seem possible to relieve the surplus enrollments projected for Chico in 1977-78.

Year-Round Operation. Chico State College plans to initiate year-round operation in 1971-72 and by 1977-78 have a summer term enrollment equal to 24.4% of the fall term enrollment. In order to accommodate the 1,170 F.T.E. excess enrollment projected for 1977-78, the balance between summer and fall term enrollments would need to be increased from the 24.4% currently planned to only 35%.

Extension of Instruction to Evenings and Saturday. Chico State College for the fall of 1966 was utilizing its "extended use facilities" at a rate of 13.9% of the total hours available. Utilizing this option to the maximum, Chico could increase its current enrollment ceiling to 16,440 F.T.E. students, or have facilities available for an additional 4710 students over that of providing for total student demand through the year 1977-78. In order to accommodate expected enrollments in 1977-78, utilization of evening and Saturday would need to rise from 13.9% to 32.1%.

Increased Enrollment Ceiling. The present site consists of 116 acres with an additional 40 acres available to meet the present enrollment ceiling. Adjacent land is available. However the college site is located in a built-up area of commercial and residential development, and access and traffic congestion could limit possible expansion. One of the existing instructional facilities could be expanded from two to four floors.

The Addition of a New College. It is apparent from the above discussion of options for Chico that the excess enrollment projected for Chico State College in 1977-78 can be accommodated through the implementation of some combination of these options, and consideration need not be given to the addition of new colleges.

(2)

San Luis Obispo. San Luis Obispo's current enrollment ceiling is projected to be exceeded by the year 1976-77. Projected excess student demand will be 780 F.T.E. students by the year 1977-78. Again, the five proposed options are applied below toward relieving this projected excess student demand.

Redirection. San Luis Obispo has the greatest statewide drawing power of enrollment throughout the state than any of the other State Colleges. In 1966, only 22.6% of its total enrollment came from the enrollment area contiguous to the campus. This statewide character is due to the unique course offerings, particularly in the fields of agriculture and engineering. In the year 1977-78, redirection of approximately 8% of the students with residence closer to another college which has projected surplus capacity could account for the projected excess student demand.

Year-Round Operations. San Luis Obispo is currently on a year-round calendar and by 1977-78, current projections indicate that summer quarter enrollment of those students who would have previously enrolled during the regular academic year will equal 21.5% of the current enrollment ceiling. To accommodate the projected excess student demand, the summer quarter enrollment would only have to be increased from the presently planned 21.5% to a total of 28% of the current enrollment ceiling.

Extension of Instruction to Evenings and Saturdays. In the fall of 1966, San Luis Obispo was utilizing "extended use facilities" to an extent of 3.1% of the total maximum 29 hours available. Utilizing this option to its maximum, the current enrollment ceiling could be increased to a total of 19,596 F.T.E. students, or have facilities available for an additional 5,956 F.T.E. students over and beyond the total projected student demand through the year 1977-78. In order to meet the projected total student demand through the year 1977-78, the current 3.1% of the F.T.E. in extended use would need to be increased on evenings and Saturday to approximately 15% to accommodate the excess demand of 780 F.T.E. students.

Increasing the Enrollment Ceiling. San Luis Obispo State College has an existing campus site of 374 acres, excluding agricultural lands, which is sufficient to expand the present enrollment ceiling by 50% or to 18,000. In addition, the present site is contiguous to agricultural land which could be available for the development of a separate nearby sub-campus.

The Addition of a New College. Any of the four options applied above would provide sufficient capacity to accommodate the projected excess student demand of 780 F.T.E. students through the year 1977-78. The Chancellor's office can therefore apply any one or any combination of these options toward relieving projected excess demand. The option of beginning a new State College to service this area should not be considered at this time.

Humboldt State College. Humboldt State College enrollment projections will exceed its current maximum planned enrollment ceiling in 1974-75. By 1977-78, excess student demand will total 1,090 F.T.E. students. The proposed options toward meeting this demand are discussed below.

Redirection. As it was indicated for Chico and San Luis Obispo State Colleges, Humboldt is also a State College which draws its enrollment on a statewide basis. In 1967, less than half of the total enrollment had their origin within the county of the college's location. For this same year, 10% of the enrollment at Humboldt State had residence in the Los Angeles area where maximum planned enrollment ceilings will not be reached by 1977-78. Further, an additional 15% of the students at Humboldt have residence in other areas where State College facilities will be available in 1977-78. Assuming that all students were redirected back to their county of origin where facilities are projected to be available, based upon current enrollment ceilings and projected student demand, Humboldt would retain capacity for an additional 538 F.T.E. students over and above the total projected student demand through the year 1977-78.

Year-Round Operations. Humboldt State College plans to initiate year-round operations in 1970-71 and by 1977-78 is currently planning to have an enrollment during the summer quarter of 25.2% of the current enrollment ceiling of those students who would have previously enrolled during the regular academic year. In order to accommodate the projected excess student demand through the year 1977-78, summer quarter enrollment would have to reach a level of 47% of the fall term enrollment.

Extension of Instruction to Evenings and Saturday. During the fall term of 1966, Humboldt State College used "extended use facilities" at a rate of 3.8%. In order to accommodate in evening and Saturday programs the 1,090 F.T.E. excess enrollment projected for 1977-78, this percentage would have to be increased to 37.6%.

Increasing the Enrollment Ceilings. The present college site consists of 124 acres with six additional acres available to meet the current enrollment ceiling. Additional land is available to expand the current site and land is also available at the Trinidad Marine Lab for the development of a separate nearby sub-campus. An increase in the enrollment ceiling to meet the projected student demand would be a desirable option since the present ceiling would continue the economies-of-scale of both capital construction and operating expenditures. (Economies-of-scale and their effects upon various enrollment levels are discussed in Appendix D.)

The Addition of a New College. It is apparent from the above discussion of options for Humboldt that the excess enrollment projected through the year 1977-78 can be accommodated through the implementation of any one or some combinations of these options, and consideration at this time need not be given to the addition of a new college to service this enrollment area.

Findings

The foregoing suggests the following findings:

1. Enrollment in the State College system has doubled since 1960 and current enrollment projections indicate that the enrollment will again nearly double by the year 1977--increasing from 125,200 annual full-time equivalent studnets to 247,260.

2. On the basis of projections of the high school graduates and the 18-24 year age group beyond 1977, subject to abrupt changes in college-going patterns, the number of State College enrollments may actually decline for a period of years after 1980 before resuming an upward trend--but at a lower rate of increase.

3. In order to plan effectively for physical plant development required for projected enrollment, the Trustees of the California State Colleges have established enrollment ceilings at each of the State Colleges ranging from a low of 5,000 F.T.E. at Humboldt to a high of 20,000 at six colleges. The maximum planned total enrollment ceiling during the regular academic year is 307,800 for the system as a whole.

4. If the State Colleges were built to planned maximums, a comparison of the 247,260 F.T.E. enrollment projected for 1977-78 and the currently planned maximum enrollment ceiling of 329,500 (including the summer quarter increment), shows that for all State Colleges combined the planned capacity would exceed the projected enrollments by more than 80,000.

5. Individual college projections indicate that prior to 1977 five State Colleges will exceed their currently planned maximum enrollment ceilings, and as a result of this "topping-out" there is projected to be an unallocated projected enrollment of some 7,000 F.T.E. students in 1977 that will have to be accommodated in some way by the State College system.

6. The State College system, without the construction of new State Colleges, has generally four major options available to provide singly or in combination for the accommodation of enrollments that exceed planned enrollment ceilings. They are:

   --Redirection

   --Year-round operation

   --Greater utilization of facilities during the nighttime hours and on Saturday

   --Higher planned enrollment ceilings on topped-out campuses

   a. It is present State College policy that redirection not be determined centrally but be determined by individual colleges working within the framework of enrollment ceilings determined by the Trustees of the State Colleges. Implementation of the option of redirection will require greater centralization of admissions and redirection policies and procedures.

   b. The anticipated reduction in capital through the year-round use of facilities was recently confirmed by the consulting firm of Touche, Ross, Bailey and Smart.

   c. The relationship of unit costs of capital construction and operation with enrollment levels and growth rates indicate that there are economies-of-scale in capital costs and it appears that, except where extremely unusual conditions exist, it is approximately one-half again as expensive to construct facilities for each F.T.E. student at a new college as it would be to construct facilities for this student at a college with a present enrollment of some 14,000. Historical data indicate there are economies-of-scale for operations for enrollments exceeding 16,000 and there is no indication as to when diseconomies-of-scale will ultimately result.

7. The 1977-78 enrollments projected for San Jose, San Diego, Humboldt, Chico, and San Luis Obispo State Colleges that exceed their planned maximum enrollment ceilings can be accommodated at each college by implementing an appropriate combination of one or more of the options of redirection, year-round operation, use of facilities during evening and Saturday hours, and/or an increase in the planned enrollment ceiling.

Conclusion

Based upon the above findings, additional State Colleges are not required to accommodate the enrollments projected for 1977-78. However, the Trustees will need to use one or more of the options in six above in order to house some students planning to attend colleges at or near their maximum planned enrollment ceiling.

CHAPTER V

UNIVERSITY OF CALIFORNIA

At the time of the Coordinating Council's 1964 report, the University of California maintained six general campuses,[1] plus the San Francisco Medical Center, and was in the process of establishing new general campuses at Irvine and Santa Cruz. University enrollment included 67,070 full-time students, representing 21.5% of the total full-time enrollment in California public institutions of higher education.[2] In the fall term 1967 (the latest term for which complete data for all three segments are available), the University, with the two additional general campuses in operation, enrolled 91,780 full-time students, or 21.46% of the full-time enrollments in public higher education.

Although the University's share of enrollments had declined from more than 35% in 1948 to less than 24% in 1959, the proportion has remained relatively constant since 1960, ranging between 21% and 23%.[3]

During the period 1960-1968, the University's fall full-time enrollment more than doubled - from 46,863 in 1960 to 96,207 in 1968. The increase amounted to 49,344 students, and averaged 6,168 students per year. Peak growth, which occurred in 1965, was 8,114 full-time students; and minimum growth of 4,183 students occurred in 1962.

Concerning this explosive growth, the University's 1966 Growth Plan states:

> ...the University of California has in recent years engaged in an expansion program unprecedented in the history of higher education. Since 1958, and particularly since the 1960 Plan, it has expanded facilities at San Diego into a general campus, opened two new general campuses at Irvine and Santa Cruz, introduced new programs in research and graduate education, including several new professional schools - medical schools at Davis and San Diego, engineering schools at Davis, Santa Barbara and Irvine, a law school at Davis, among others - and developed an 'education abroad' program in cooperation with ten foreign universities. During this same period, the University has also undertaken the transformation of the Davis, Santa Barbara and Riverside campuses into full general campuses of the University.
>
> These and many other developments of major importance have made it possible for the University to increase enrollments from 43,478* in 1958 and 49,169* in 1960 to over 79,000* students in 1965. It now seems unlikely that ever again will the University be called upon to increase its total activity so greatly in such a short span of time.
>
> (*Full-time and part-time fall enrollment 'headcount'.)

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[1] Berkeley, Davis, Los Angeles, Riverside, Santa Barbara, and San Diego (then in its infancy with a total enrollment of only 559 full-time students).

[2] CCHE California's Needs for Additional Centers of Public Higher Education, No. 1014, December 1964, p. 38.

[3] See Appendix E-1 for yearly comparisons.

> In this period of expansion the University has been served well by the development of long-range academic and physical development plans for each campus and for the entire University. The philosophy of the 1960 Plan was that planned growth was essential to preserve the quality of education offered by the University.[1]

The Council's 1964 study reported that planned maximum enrollment ceilings for the UC general campuses totalled 177,500 students, plus 7,500 at the San Francisco Medical Center. The report stated "projections show that students will not exceed the capacity of the University until sometime after 1980, possibly until after 1985."[2] Subsequent revisions at Davis, Santa Barbara and Riverside have increased the University's planned maximum ceilings on the eight general campuses to more than 206,400 average annual enrollments, exclusive of the San Francisco Medical Center. Given present projections, this total ceiling will not be reached, however, until the decade 1990-2000, when Irvine, San Diego, and Santa Cruz reach their planned maximums. According to present University plans, year-round operations, providing for summer enrollments equal to 40% of average three-term enrollments at all campuses (except Riverside, where a 30% summer enrollment is planned), will further extend total University capacity on an annual basis by another 13%, or 26,800, to nearly 234,000 students by the year 2000. If summer quarter enrollments were to be planned at 70% of the three-term average, University capacity would be increased by 47,600 to nearly 254,000. Summer enrollments equal to the three-term average (100% balance) would yield a total University capacity of 274,500.

Nevertheless, the 1964 report also pointed out that a new University of California campus in any one of three areas (San Joaquin Valley, Los Angeles, or the San Francisco Bay area) would grow rapidly enough to meet minimum enrollment levels of 5,000 students within a seven to ten year period from the date of opening, although some redirection of students from other, established, campuses would be necessary.[3] On the basis of the report, the Council also determined that a"'definite ultimate need' exists for a University campus in the Los Angeles area (the counties of Los Angeles, Ventura, San Bernardino, Riverside and Orange) and for one in the San Francisco Bay metropolitan area (the counties of San Francisco, Marin, Solano, Sonoma, Napa, Contra Costa, Alameda, Santa Clara and San Mateo)."[4]

The Council further concluded "It appears at this time authorization for the establishment of one of these campuses may be recommended by the Coordinating Council to the Legislature in 1969 and recommendation for the second campus approximately in 1975." Recognizing, however, that six to eight years' lead time is required to secure a site, and to develop master academic and architectural plans before a campus can become operational, the Council also commented that the advance acquisition of sites would be justified when the Regents presented evidence and the Council agreed that "carefully restricted circumstances" warrant such acquisitions.[1] To date, the Regents have not sought to acquire sites in either of the two areas where the Council, in 1964, found a definite ultimate need to exist.

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[1] "Planned Growth of the University of California," University Bulletin, Vol. 14, No. 26, Feb. 17, 1966, p.1.

[2] California's Needs for Additional Centers..., p. 43.

[3] Op. cit., pp. 13-14.

[4] Op. cit., p. 46.

Determining whether any future need exists for additional University campuses, this chapter also reviews the 1964 Council recommendation for the need and timing of two new campuses.

Projections of University Enrollment Demand

Enrollment projections for the University, as for other segments of higher education, are made by the Population and Research Section of the State Department of Finance, as explained in Chapter II. These projections may be referred to as the "demand" for University entry.

The official state projections are limited to undergraduate enrollments because no statistically valid relationships have been established for determining the demand for graduate training. Students entering graduate schools are more mobile than are those entering college for the first time, in terms of both time of entry in relation to time of receipt of the baccalaureate degree and in place of attendance.

Comparative geographic mobility of graduate students is illustrated by a cursory examination of the residences of students at the time of admission to the University. In the fall quarter 1965, for instance, roughly 5% of undergraduates admitted were from other states and 1.7% were from foreign countries; in that same term, nearly 24% of graduate students admitted were from other states and another 11.3% were from foreign countries.[2] Thus, any prediction of total graduate enrollments in future years would depend to a substantial degree on the total national "pool" of those wishing to undertake graduate education.

Projections of graduate enrollments are also subject to many more variables than are undergraduate projections. Some of these are: federal draft laws; employment opportunities for baccalaureate degree holders in business, industry, and government; availability of education-coordinated employment such as teaching and research assistantships; out-of-state tuition levels; availability of substantial amounts of individual financial aids such as scholarships and fellowships, tuition waivers, loans, etc.; voluntary and involuntary changes in employment patterns and goals of baccalaureate degree holders; and varying needs for more advanced knowledge (such as those in the advanced space technologies). The choice of attending or not attending graduate schools is far more voluntary than is the perceived necessity in today's society of at least attending, and preferably completing, some level of undergraduate higher education.

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[1] _Op.cit._, p. 46.

[2] _Statistical Summary of Students Fall Quarter 1967_, University of California Office of Analytical Studies, p.30. When counting actual enrollments (registrations), however, the University reports that 3.67% of undergraduates and 36.7% of graduate students were from other states and foreign countries.

Since Department of Finance projections cannot now include estimates of the demand for graduate enrollment in the University, this report relies, instead, on the University's projections of enrollment - essentially the number of graduate students the University plans to accommodate.

Appendix E-2 contains the Department of Finance projections of undergraduate enrollment demand, i.e., those qualified and wishing to enter or continue in the University. The projection is made on the basis of regular fall undergraduate enrollment, including all full-time and part-time students admitted or continuing under the regular admissions and retention standards of the University (part-time students comprise about 3.7% of the total). Graduate students, totalling one-third of the University's present enrollment, are not included.[1]

Between 1968-69 and 1977-78, the Department projects a total demand increase of 39,630 undergraduate students for fall-term enrollment, an average of 4,403 each year during the period. Yearly demand will vary from a maximum of 5,006 additional enrollments in 1969-70 to a minimum of 4,063 in 1976-77. Increases in graduate enrollment planned by the University will add another 28,000 students to its total growth. Thus, despite the University's expressed hopes it would not be called upon again to assume a task of expansion similar to that of the 1960-1968 period, projections of student demand in the 1970's appear to require further substantial growth, although not quite of the magnitude of the early 1960's.

University-Planned Enrollment Growth

The Regents in 1960 adopted a series of internal planning guides for expansion of the University, three of which are pertinent to the present study:

> 2. Appropriate planning limits will be established for all campuses. The Master Plan [for Higher Education in California in 1960-75] recommended that 27,500 be recognized as an upper planning limit for any general campus of the University. This will be accepted as the planning size for Berkeley and Orange [subsequently named Irvine], and Santa Cruz. Davis, Santa Barbara, and Riverside will be planned for 15,000, 15,000 and 10,000 respectively.

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[1] Discussion of graduate enrollments later in this chapter, however, will point out that the University plans to increase its proportion of graduate students to about 40% by 1975-76.

> 3. New campuses will be established as they are needed, in time to provide for students who cannot be accommodated on existing campuses. They will be established with a 'lead-time' interval of at least four years between the acquisition of title to the site and the admission of the first students.
>
> 4. No University campus will be expanded at a rate which would imperil academic standards. Growth must be anticipated by academic planning, recruiting of faculty and staff, and acquisition of libraries and other research facilities. Planned rates of growth must allow for such preparation.[1]

Additions to these guidelines were made in 1965 as a result of extensive discussions within the University community and in recognition of the need for growth. The additions were:

> ...Redirection of students among the several campuses will be necessary to maintain the desired controlled growth rates for each campus. It is now considered highly desirable--
> (a) that growth rates fall in the range of 500-1000 students /per campus/ per year until maximum size is reached;
> (b) that administrative redirection of students to any one campus should not be so great as to impair the effectiveness of that campus; and
> (c) that the too rapid cessation of growth, as a campus approaches its maximum size, should be avoided as being at least as disadvantageous as a too rapid acceleration of growth.
>
> ...
>
> 5. Year-round operation will be developed on the basis of a summer enrollment estimated to reach eventually 40 per cent of the fall quarter enrollment of the University as a whole.[2]

The University's 1966 Growth Plan contains the following comment concerning the establishment of enrollment ceilings on the various campuses:

> The University-wide Committee on Educational Policy is unanimous in accepting an ultimate limit on campus size. This is taken to mean a number of faculty and students which cannot be increased without decreasing the quality of education. There is no reason to believe that the number of 27,500, or any other number, represents a limit

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[1] "Planned Growth of the University of California", op. cit., p. 1.

[2] "Planned Growth of the University of California", op. cit., p. 2.

> for all of our campuses without regard to their characteristic and distinctive educational goals. /emphasis supplied/ The desire for differentiation among the campuses must imply some latitude in ultimate size. Furthermore, considerable autonomy must be permitted at the campus level in determining size limits since this is intimately associated with educational goals.... Therefore, revisions of the maximum figures should be made only in terms of educational policy objectives...[1]

While the Department of Finance undergraduate demand projections (which take into account diversion of lower division students to Junior Colleges) are made in terms of fall enrollments, the University converts these figures to a three-term average annual enrollment, taking into account attrition and enrollment increases which occur during the academic year.

In order to provide comparable data, the Department's figures are converted in Table V-1 to the three-term average annual basis used by the University,[2] and the discussion which follows uses this measure.

In terms of average annual enrollments, the Department of Finance projections indicate an undergraduate demand for the University of 105,703 in 1977-78; this represents a total increase of 38,625 over the 1968-69 estimated undergraduate enrollment of 67,078. Peak increase in demand will occur in 1969-70 and 1970-71, when additional enrollments of 4,897 and 4,825, respectively, will need to be accommodated. The yearly increase in demand will range from the 1969-70 maximum of 4,897 to a minimum of 3,955 in 1976-77, and will average 4,292.

University-planned enrollments shown in Table V-2 represent the supply of student spaces, or, in effect, the University's current annual enrollment ceilings.

Briefly, the University's plans provide for a growth of 15,975 three-term average annual undergraduate enrollments, from the 1968-69 level of 65,708 to 81,683 in 1977-78. Adding currently-planned summer quarter increments of 7,316[3], growth in four-term average annual enrollment is expected to reach 23,291 between 1968 and 1977, and to provide a total 1977 enrollment of 92,369.

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[1] "Planned Growth of the University of California", *op. cit.*, pp. 1-2.

[2] Factors applied to the Department's estimates by the University and hence those used in this section to convert fall quarter enrollment to three-term average annual enrollment are: lower division, 0.9089%; upper division 1.0238. The conversion factors have been empirically derived through analysis of past enrollment performances. It is entirely possible that some revision will take place when the full effects of the quarter system and year-round operation combined occur after the latter conversion is completed at all University campuses by 1972.

[3] Summer quarter increments are actual summer enrollments annualized by dividing total summer enrollments by three. Thus, an increment of 7,316 represents a total summer enrollment growth of 21,948 actual student registrations.

Yearly increases planned by the University are shown in Table V-3. Since the summer quarter, or year-round operation, permits the University to increase the availability of its resources to meet student demand, summer quarter increments are included in determining whether the University's ability to accommodate students will meet the total projected demand. Present University plans include summer quarter enrollments at 40% of the three-term average annual enrollments at all general campuses with the exception of Riverside, which is planned to accommodate 30%.

TABLE V-1

UNIVERSITY OF CALIFORNIA
ACTUAL AND PROJECTED UNDERGRADUATE
ENROLLMENT DEMAND
THREE-TERM ANNUAL AVERAGE
1960-61 - 1977-78

Year	Lower Division	Upper Division	Total Undergraduates
1960-61	15,075	17,308	32,383
1961-62	17,331	17,812	35,143
1962-63	18,559	19,162	37,721
1963-64	20,565	20,856	41,421
1964-65	21,994	24,117	46,111
1965-66	25,276	26,120	51,396
1966-67	27,078	29,627	56,705
1967-68	29,385	33,051	62,436
1968-69	31,262	35,816	67,078
1969-70	33,063	38,913	71,976
1970-71	34,813	41,988	76,801
1971-72	36,548	44,519	81,067
1972-73	38,315	47,018	85,333
1973-74	39,897	49,495	89,392
1974-75	41,612	51,893	93,505
1975-76	43,589	54,018	97,607
1976-77	45,202	56,360	101,562
1977-78	46,672	59,031	105,703

SOURCE: Appendix E-1: State Department of Finance, Population and Research Section

TABLE V-2

THE UNIVERSITY OF CALIFORNIA
OFFICE OF THE VICE PRESIDENT--PLANNING AND ANALYSIS

University of California Student Enrollments--1966-77 Through 1977-78--Headcount

	Actual		Estimated[a]									
	1966-67	1967-68	1968-69[b]	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
General Campuses (3-Term Average)												
Lower Division	27,049	29,392	29,663	29,556	30,488	30,786	30,977	31,156	31,639	32,010	32,794	33,562
Upper Division	29,517	33,176	36,045	38,108	36,477	38,644	40,243	42,219	44,031	45,370	46,835	48,121
Undergraduates	56,566	62,568	65,708	67,664	66,965	69,430	71,220	73,375	75,670	77,380	79,629	81,683
1st Stage	13,960	14,580	14,559	15,811	19,163	20,552	22,109	23,558	25,117	26,190	27,196	28,349
2nd Stage	8,817	9,899	10,196	10,854	12,352	13,638	14,846	16,137	17,338	18,455	19,300	19,993
Graduates	22,777	24,479	24,755	26,665	31,515	34,190	36,955	39,695	42,455	44,645	46,496	48,342
Sub-total	79,343	87,047	90,463	94,329	98,480	103,620	108,175	113,070	118,125	122,025	126,125	130,025
Medical & Health Sciences												
Upper Division	929	1,031	473	469	495	511	520	529	562	587	632	672
1st Stage	3,746	3,973	4,972	5,367	5,694	5,980	6,287	6,606	7,099	7,412	7,820	8,169
2nd Stage	299	429	430	511	678	730	797	837	883	942	966	986
Graduates	4,045	4,402	5,402	5,878	6,372	6,710	7,084	7,443	7,982	8,354	8,786	9,155
Sub-total	4,974	5,433	5,875	6,347	6,867	7,221	7,604	7,972	8,544	8,941	9,418	9,827
Summer Quarter Increments												
Lower Division	-	337	944	1,990	2,271	3,266	3,572	3,812	4,065	4,183	4,284	4,382
Upper Division	-	1,092	2,426	2,888	3,076	4,247	4,724	5,200	5,674	5,953	6,141	6,304
Undergraduates	-	1,429	3,370	4,878	5,347	7,513	8,296	9,012	9,739	10,136	10,425	10,686
1st Stage	-	527	1,099	1,366	1,807	2,400	2,699	2,965	3,256	3,431	3,557	3,704
2nd Stage	-	425	758	910	1,140	1,574	1,783	2,008	2,229	2,414	2,523	2,608
Graduates	-	952	1,857	2,276	2,947	3,974	4,482	4,973	5,485	5,845	6,080	6,312
Sub-total	-	2,381	5,227	7,154	8,294	11,487	12,778	13,985	15,224	15,981	16,505	16,998

[a] 1968-69 and 1969-70 have been revised in light of Fall Quarter 1968 registration data. Revisions to subsequent years depend on additional information to be obtained from the State Department of Finance and will be made in February 1969. During the interim, however, some discontinuities in enrollment trends between 1969-70 and later years are unavoidable.

[b] Actual Summer Quarter 1968 enrollment increment used. Three-term averages are high-confidence estimates based on Fall Quarter 1968 registration data.

Comparison of the annual increase in projected demand with the University's planned annual increases in enrollment in Table V-3, shows that the projected average yearly demand increase (4,292) will exceed the University's planned average yearly increases in enrollment (2,588) by approximately 1,704, resulting in an increasing number of unaccommodated students. The difference between projected demand and planned enrollments ranges from a deficit of 5,055 in 1970 (when the University plans a decrease of 230 in undergraduate enrollments and the increased demand is 4,825), and a surplus of 365 in 1971 (when four campuses begin summer quarter operations). Table V-4 shows the difference between the projected growth of total undergraduate enrollment demand and the University's present enrollment plans. Annual variations in the University's planned enrollment increases are caused by a number of factors, including the institution of year-round operations in the summer of 1971 at four University campuses; the University's efforts to achieve a 40:60 ratio of lower division to upper division enrollments as specified in the Master Plan; reduction of the number of undergraduate enrollments at two campuses to accommodate planned graduate enrollment growth; and the availability of physical facilities.

TABLE V-3

UNIVERSITY OF CALIFORNIA PLANNED ANNUAL UNDERGRADUATE ENROLLMENT INCREASES COMPARED WITH PROJECTIONS OF ANNUAL INCREASES IN DEMAND 1969-70--1977-78

	(1)	(2)	(3)	(4)	(5)
	Finance Department	University of California			
Year	Projected Demand Increase by Year in 3-Term Average Annual Enrollments	Planned Increase 3-Term Average Annual Enrollments	Planned Increase Summer Quarter Increments (40% Balance)	Planned Increases Total 4-Term Average Annual Enrollments	Unaccommodated Demand
1969	4,898	1,956	1,508	3,464	1,434
1970	4,825	(699)	469	(230)	5,055
1971	4,266	2,465	2,166	4,631	(365)
1972	4,266	1,790	783	2,573	1,693
1973	4,059	2,155	716	2,871	1,188
1974	4,113	2,295	727	3,022	1,091
1975	4,102	1,710	397	2,107	1,995
1976	3,955	2,249	289	2,538	1,417
1977	4,141	2,054	261	2,315	1,826
Average Yearly Increase	4,292	1,775	813	2,588	
Average Yearly Deficit					1,704

The unaccommodated increased demand shown in Table V-3 is identified in terms of annual increases in demand, while Table V-4 shows the effect of unaccommodated demand in terms of its impact on total enrollment in the University.

TABLE V-4

COMPARISON OF TOTAL PROJECTED UNDERGRADUATE DEMAND AND UNIVERSITY-PLANNED ENROLLMENTS
1968-69--1977-78

	Demand Projection Average Annual Total Enrollments	University Planned Total Enrollments (Incl. Summer Quarter Increments at 40%)	Annual Deficit or Surplus in Total Enrollment
1968-69		69,078	-0-
1969-70	71,976	72,632	+ 656
1970-71	76,801	72,402	-4399
1971-72	81,067	77,033	-4034
1972-73	85,333	79,606	-5727
1973-74	89,392	82,477	-6915
1974-75	93,505	85,499	-8006
1975-76	97,607	87,606	-10,001
1976-77	101,562	90,144	-11,418
1977-78	105,703	92,369	-13,334

*Does not include undergraduate enrollments in Medical and Health Sciences

In these estimates, there is assumed to be no unmet demand in 1968-69 - *i.e.*, all those who were qualified and who wished to enter the University in the fall quarter were accommodated.

The University's Planned Graduate Enrollments

The problems of projecting demand for graduate enrollment have already been discussed. Since such projections have not been developed, only the University's indication of the number of graduate students[1] it plans to accommodate is considered. These enrollment plans are indicated in Table V-2, and the planned annual increase in graduate enrollments is shown in Appendix E-3.

Briefly, the University plans a total increase of 23,582 graduate enrollments, plus a summer quarter increment increase of 4,455, over the nine-year period,1968 to 1977. Estimated 1968-69 four-term average annual graduate enrollment (including the 1968 summer quarter), is 26,612. In 1977, graduate enrollment is planned to be 54,654 (including the summer quarter increment), more than double the present graduate enrollment.

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[1] Discussion of graduate enrollments excludes those at the San Francisco Medical Center, the California College of Medicine at Irvine, and the Davis and Los Angeles Medical Schools.

This increase is consistent with the 1966 Growth Plan, in which provisions were made for increasing the proportion of graduate to undergraduate students from the 1965-66 level of 32:68 to the level of 41:59 by 1975-76.[1] As currently planned, enrollment distribution by level in 1977-78 will be:

Level	Three-term Average	Three-term Annual	Four-term Average	Four-term Annual	Four-term average annual including Medical & Health Sci.	
	No.	%	No.	%	No.	%
Undergraduates	81,683	62.82	92,369	62.83	93,041	59.07
Graduates	48,342	37.18	54,654	37.17	64,481	40.93
	130,025	100.00	147,023	100.00	157,522	100.00

Regarding the growth of graduate enrollments, the 1966 Growth Plan stated:[2]

> For the years 1965 to 1975 the per cent of graduate students was assumed to increase from 32% to 38% of total enrollment. This represents roughly the same percentage point increase as occurred from 1955 to 1965 (25% to 32%). Thereafter, graduate students as a per cent of total enrollment were forecast to increase, but at a rate of only about 40% of the previous period; in fact, the 25-year period from 1975 to 2000 is projected to have roughly the same absolute percentage point increase as the preceding ten years, rising from 38% in 1975 to 45% in 2000. This produces approximately an eight-fold increase in graduate students (exclusive of medical and health sciences) from 1960 to 2000.
>
> Cartter and Farrell, in "Higher Education in the Last Third of the Century," project a six-to-eight-fold increase nationwide in graduate students over the period 1960-2000 based on the two sets of estimates they consider most likely indicators of enrollment. It is likely that the University of California will exceed the national average. A number of leading universities already [in 1966] exceed the 45 per cent ratio assumed here for the University of California in the year 2000. Following is the current ratio of graduate to undergraduate enrollment at five other major universities:

Columbia	53/47
Harvard	71/29
Michigan	40/60
Stanford	48/52
Yale	50/50

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[1] As planned, this distribution encompassed all enrollments, including those in Medical and Health Sciences and in the medical schools; the latter are therefore shown for comparison purposes only in the 1977 enrollment distribution.

[2] Op. cit., p. 7.

The major implication of increased graduate growth, however, is that under present University plans, it is accomplished in part by reducing the expansion of undergraduate enrollments. It therefore becomes necessary to seek ways of permitting adequate expansion of the graduate program while at the same time providing enough "spaces" for the total undergraduate demand for University entrance.

Various options for increasing the capability of the University to accommodate growth in undergraduate demand are discussed below.

Options for Accommodating Excess Undergraduate Student Demand

Options available to the University (assuming public policy will continue to be the provision of higher education opportunity for all who seek it, and that the University will continue to accept all qualified applicants) rely basically on various ways of accommodating more students on each campus.

The first for purposes of this discussion is increasing use of year-round operations.

At present, only Berkeley and Los Angeles are operating on a year-round basis; Santa Barbara is scheduled to begin a summer quarter in 1969, and Irvine is scheduled to begin summer operations in 1970. The remaining campuses - Davis, Riverside, San Diego and Santa Cruz - will begin summer quarters in 1971.

University plans currently provide for a maximum summer quarter operation equal to 40% of total three-term average annual enrollments at seven general campuses, and a maximum of 30% for the Riverside campus. In 1977, for example, total three-term average annual undergraduate enrollments are estimated to be 81,683 while the summer quarter is planned to provide an increment of 10,686 average annual enrollments, or an increase of 13.07%.[1]

Increasing summer quarter planning to 50% of the University-wide three-term average annual enrollment (or 40,851 summer registrations) would yield an annualized increment of 13,617, or 16.67%. At a 70% level (summer registrations totalling 57,178), the annualized summer increment would be 19,059, or 23.33%, thus accommodating 8,373 more students than now planned. This would represent slightly less than two-thirds of the unaccommodated undergraduate demand.

Summer registrations equal to the three-term average annual enrollment (or 100% balanced enrollment) would yield an average annual increment of 27,228.

However, full year-round operations at the 100% balance level may not be feasible because of many unresolved problems of both fiscal and educational nature.

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[1] This increment represents actual summer undergraduate registrations of 32,058 students, or 39.23% of the three-term average annual undergraduate enrollment.

A second option for accommodating more students on each campus is scheduling a substantially greater number of classes during evening hours (5 to 10 p.m.) on Monday through Friday, and on Saturday.

In its study of space and utilization standards, the Council, in fall 1963, found that the vast majority of classes at the University were scheduled during the 8 a.m. to 5 p.m. period on Monday through Friday; few classes were scheduled after 5 p.m. or on Saturday, although all University campuses were open during the evening hours (with some libraries open regularly until midnight), and all day on Saturday. University facilities at that time included a total of 689 lecture and seminar rooms, and 534 laboratories. Between 8 a.m. and 5 p.m. Monday through Friday, lecture and seminar rooms were scheduled for use an average of 27.1 hours each week or 60% of the available time, with an average occupancy equalling 57% of the total available student stations. Laboratories were in class-scheduled use an average of 16.5 hours or 37% of the available time during the same period, with 73% occupancy.

Between 5 and 10:00 p.m. and on Saturday, however, lecture and seminar rooms were scheduled for use an average of only 1.8 hours weekly, with occupancy of 28%; laboratories, also in class-scheduled use an average of 1.8 hours, had 67% occupancy.[1]

No comprehensive classroom utilization studies have been made since the quarter system was instituted although the University's annual utilization audit shows that in 1967 little change had occurred from the 1963 study. However, it can be assumed that the quarter system has caused no great change with respect to the scheduling of "day-time, week-day" classes vis a vis "evening and Saturday" classes, and that upon examination, the findings of the 1963 study will be closely parallel to those which would be obtained in 1968.

The 8 a.m. to 5 p.m. Monday through Friday time period provides a total of 45 hours available for class scheduling. It is generally within these hours that the University is accommodating a total of 90,463[2] students on the eight general campuses. Extending the scheduling period to 10:00 p.m. Monday through Friday would add five hours per day, or 25 hours per week; utilizing only the 8 a.m. to 12 noon periods on Saturday would add another 4 hours per week, for a total additional scheduling time of 29 hours.[3]

It can be roughly estimated that the theoretical maximum additional number of students who could be accommodated through use of the extended hours would equal 29/45, or 64.4% of currently planned enrollments.

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[1] Space and Utilization Standards, California Public Higher Education, CCHE Report No. 1027, September 1966. p. 59.

[2] Three term average annual enrollment, 1968-69.

[3] This was the scheduling pattern adopted by many public and private institutions throughout the United States after World War II, when the great influx of returning veterans encouraged by the GI Bill literally flooded campuses with students; with virtually no construction taking place during the war years, the campuses were far behind in their physical building programs, and had to accommodate excess students in any way possible.

Subtracting presently-scheduled use (1.8 hours) would yield an increase of 27.2 hours, or 60.4% in scheduling time available. Applying this percentage increase to the University planned 1977-78 three-term average annual undergraduate enrollment (81,683) would permit a maximum increase in enrollment of 49,335.

However, a careful analysis of the costs and benefits of extending the teaching day and teaching week would be required on each campus before such programming were instituted.

Two related options for accommodating more students on each campus are (a) increasing annual campus intake of students (including both continuing and new students) by raising currently-planned yearly enrollment levels, and (b) increasing planned maximum ceilings on campuses which are topping-out, i.e., reaching these ceilings. It should be pointed out that in contrast to the two preceding options, this policy could call for increasing the physical capacity at a campus, either by speeding-up the time at which new buildings are planned for construction, or by adding buildings beyond those presently planned to accommodate the maximum enrollment ceiling. Currently planned maximum ceilings and the University's projected dates of reaching those ceilings on the general campuses of the University are:

Campus	Planned Ceiling	Date of Reaching Ceiling
Berkeley	27,500	1967-1968
Davis	16,000[a]	1975-1980
Irvine	25,000[b]	1990-2000
Los Angeles	25,000[c]	1967-1968
Riverside	25,000	Not established
San Diego	25,000[d]	1990-2000
Santa Barbara	25,000	1980-1990
Santa Cruz	27,500	1990-2000

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[a] 2,984 Medical and Health Sciences graduate students are excluded.

[b] 2,500 Medical and Health Sciences graduate students are excluded.

[c] 2,500 Medical and Health Sciences graduate students are excluded.

[d] 2,500 Medical and Health Sciences graduate students are excluded.

Table V-5 shows current University plans for enrollment increases on those campuses still growing, as well as reductions in undergraduate enrollment planned for Berkeley and Los Angeles. It also shows the increased annual intake of students necessary to meet presently-projected unaccommodated demand.

The Berkeley campus has already exceeded its planned maximum ceiling for overall enrollments by 457 students in 1967-68 and by 100 in 1968-69. However, because of plans to increase graduate enrollments on the campus to the 40% level by 1975, the current "mix" of students provides an "over-enrollment" of 2,750 undergraduate students, which the University plans to reduce in annual increments through 1974-75, while at the same time increasing the number of graduate students by approximately the same number.

The Los Angeles campus has also exceeded its planned maximum ceiling, by 1,250 students in 1967-68 and by 1,075 in 1968-69. The same situation with respect to the mix of students prevails here as at Berkeley. Between the current year and 1975-76, the University plans to reduce undergraduate enrollment at UCLA by 4,655 three-term average annual enrollments--from 18,145 in 1968-69 to 13,490 in 1975-76 and thereafter. Graduate enrollments will be increased from the present level of 8,050 to 11,600 (excluding those in Medical and Health Sciences) in 1975-76 and thereafter.

The reductions in undergraduate enrollment at Berkeley and Los Angeles create an additional enrollment demand of 6,988 which must be met by the remaining campuses. These reductions (and the effect they have on total University intake of students) are shown in Table V-5.

During the period of this study, 1968-1977, the Davis campus is also expected to reach its maximum ceiling. However, a possible upward revision of the ceiling is currently under discussion among University officials. (If annual growth on the Davis campus were to be continued through 1977-78 at the average of the three-year period 1972-1974, it would be necessary to raise the enrollment ceiling by at least 2,200 undergraduate students and 1,390 graduate students, or a total of 3,590 by 1977). The effect of the topping-out of Davis on unaccommodated demand is also shown in Table V-5, as well as that of permitting the campus to continue growing.

None of the remaining campuses is planned to reach its maximum ceiling until well beyond 1977.

The presently planned growth rate on the campuses still growing averages 8.12% over the nine-year period; this rate includes the accommodation of the reduction in enrollments at Berkeley and Los Angeles. If the University wishes to begin the substantial increase in graduate enrollments in 1969-70 as currently planned, undergraduate enrollment at Berkeley and Los Angeles could be maintained at the current level (or the planned reduction could be delayed) in order to meet the statewide excess demand. It would then be necessary to increase the maximum ceilings by 2,750 at Berkeley and 4,655 at Los Angeles. An alternative would be an increase in the average annual student intake on the other campuses from 8.12% to 10.16%, which would permit the planned reductions as well as the accommodation of unmet demand.

TABLE V-5

EFFECTS ON OTHER CAMPUSES OF UNIVERSITY-PLANNED REDUCTIONS IN AVERAGE ANNUAL UNDERGRADUATE ENROLLMENTS AT BERKELEY AND LOS ANGELES

	1968-69	1969-70[a]	1970-71	1971-72	1972-73	1973-74	1974-75[b]	1975-76	1976-77	1977-78	Net Change 1968-77
University-Planned Enrollments at Berkeley and Los Angeles[c]	39,265	39,058	35,269	34,663	33,540	33,002	32,622	32,277	32,277	32,277	
(Reduction)		(-207)	(-3,789)	(-606)	(-1,123)	(-538)	(-380)	(-345)	0	0	- 6,988
Enrollments Planned on Campuses Still Growing	29,933	33,574	37,133	42,370	46,066	49,475	52,877	55,329	57,867	60,182	
(Increase)		(+3,641)	(+3,559)	(+5,237)	(+3,696)	(+3,409)	(+3,402)	(+2,452)	(+2,538)	(+2,315)	+30,249
Planned Percentage Increases on Campuses Still Growing		12.16%	10.60%	14.10%	8.72%	7.40%	6.87%	4.63%	4.58%	4.00%	avg.+8.12%
Net University-Planned Undergraduate Enrollment	69,198	72,632	72,402	77,033	79,606	82,477	85,499	87,606	90,144	92,459	+23,261
Net Annual Increase, University-wide		3,464	-230	4,631	2,573	2,871	3,022	2,107	2,538	2,315	
Annual Increase in Demand		4,898	4,825	4,266	4,266	4,059	4,113	4,102	3,955	4,141	+38,625
Difference Between Demand and Net Annual University-planned Increase		-1,434	-5,055	+ 365	-1,693	-1,188	-1,091	-1,995	-1,417	-1,826	-15,334
Difference Between Demand and Total Annual Increases on Campuses Still Growing		-1,257	-1,266	+ 971	- 570	- 650	- 711	-1,650	-1,417	-1,826	- 8,376
Add Continued Growth at Davis, 1975-1977								+ 724 - 926	+ 724 - 693	+ 724 -1,102	- 6,204
Percentage Growth Required to Accommodate Demand		16.36	14.37	11.49	10.07	8.81	8.31	7.76	7.15	7.16	avg.+10.16%

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[a] Six campuses: Davis, Irvine, Riverside, San Diego, Santa Barbara, Santa Cruz

[b] Davis campus reaches its planned ceiling and is not planned to grow beyond 1974.

[c] Includes 90 average annual upper division enrollments in Medical and Health Sciences at Los Angeles, 1969-70 through 1977-78.

All of the above options would, in some measure, permit the University to increase its presently-planned annual growth, *i.e.*, the annual intake of new enrollments plus the accommodation of continuing students. While the first two would individually permit a substantial increase in annual growth, it would appear that a combination of all three options might provide an opportunity for the University to plan its growth more adequately, with fewer problems, than would the institution of, for example, only increased year-round operations. The basic goal of such planning, of course, is to allow University planned enrollments to meet the projected undergraduate demand in each year.

A fourth option, actually one which is already in use, permits the University to meet projected demands for student entry by *redirecting students to campuses where there is capacity for accommodating them*. This has been a policy used by the University as a statewide institution in order to permit orderly growth of new campuses and to direct applicants away from those nearly or already topped-out.

The University's policies and procedures for redirecting students are well-developed, and currently operating with a considerable degree of efficiency, enabling the University to adequately control enrollments on individual campuses. At the same time, these policies and procedures are also designed to protect students from undue hardship caused by redirection by permitting exceptions to be made based on the judgment of local campus officials in consultation with students, and by the provision of adequate financial assistance to students where necessary.[1]

It is assumed that these policies and procedures will continue in effect, and that redirection will enable the University to provide adequate distribution of enrollments among the campuses in accordance with their capabilities for accommodating additional students. In addition, these policies may greatly facilitate application of the other options for increasing total intake of students.

A fifth option for meeting projected enrollment demand is *construction of one or both of the new campuses for which the Council in 1964 found a "definite ultimate need*." Identifying the Los Angeles and San Francisco Bay areas as those in which such a need would exist, the Council did not specify which of the two areas should be served first. It was, however, indicated that construction of two campuses at the same time would not be needed.[2] While the present report contains a number of alternative methods of meeting the University's growth needs other than new campus construction during the coming nine-year period, it may be useful to note the following information relating to population growth and University enrollments in the two areas (Los Angeles and San Francisco Metropolitan Bay Area).

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[1] For a full explanation of the University's policies and procedures, see *The Flow of Students in California Higher Education 1968*, CCHE Staff Report 68-10, May 20, 1968. pp. 50-57.

[2] The Council's statement was "It appears at this time authorization for the establishment of one of these campuses may be recommended . . . in 1969 and . . . the second approximately in 1975."

According to the 1960 Federal Census, the five counties included in the Los Angeles area (Los Angeles, Ventura, San Bernardino, Riverside and Orange) contained 49.28% of the state's total population, or 7,751,616 people. The first year for which county-of-origin data were available for all students enrolled in the University was 1961; in the fall term, these five counties contributed 24,770 students.[1]

In the fall term 1964, population in the five Los Angeles area counties had risen slightly to 49.97% of the state's total; the University enrollment from these counties had increased to 31,762. The latest period for which county-of-origin data are available is the fall term 1967. While the State Department of Finance estimated that the Los Angeles area population remained at 49.97% as of January 1, 1967, fall term University enrollment from these counties increased to 40,848. The total increase between 1961 and 1967 was 16,078 students.

At the same time, population of the nine-county San Francisco Bay Metropolitan Area[2] as a percentage of the state's total declined from 23.12% (3,638,939) in 1960, to 23.07% in 1964, and to 22.90% (4,466,700) in 1967. Enrollment originating in these counties increased from 13,152 in 1961 to 16,258 in 1964, and increased again to 23,036 in 1967, The total increase amounted to 9,884 students.

It is thus apparent that population growth in the Los Angeles area is occurring at a faster rate than in the San Francisco area, and that total University enrollment from the Los Angeles area exceeds that from the San Francisco Bay area. On this evidence alone, one cannot determine which area demonstrates the greater potential need for a new campus when the decision is made to begin construction.

Expansion vs New Construction

A major factor in considering whether to construct a completely new campus is, of course, its cost as compared with alternative ways of meeting enrollment demands. One of these alternatives is the expansion of existing campuses. Although it has not been possible in this study to fully evaluate the differences between start-up costs of new campuses and the costs of increasing existing facilities to allow for enrollment growth, four campus examples will serve to illustrate the point.

The University calculates that it cost $11,500[3] per full time equivalent student in state and federal capital construction funds to accommodate an increased enrollment of 60,326 F.T.E. students between

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[1] All information regarding county of origin of students is taken from the University's "Statistical Summary of Students" for the pertinent year.

[2] The counties of San Francisco, Marin, Solano, Sonoma, Napa, Contra Costa, Alameda, Santa Clara and San Mateo.

[3] Current cost index, ENR 1170 constant 1968 dollars.

1945 and 1967.[1] This average cost includes the expansion of existing general campuses at Berkeley and Los Angeles; expansion and transformation of limited campuses at San Diego, Santa Barbara, Riverside, and Davis into general campuses; and construction of new campuses at Irvine and Santa Cruz. (Since the University calculation does not include the use of endowed and other funds, the total cost of enlarging the University is undoubtedly somewhat higher per student than the amount stated.)

Comparing the costs of expanding the Davis and Santa Barbara campuses during the period 1960 to 1968 (during which enrollment increased by 8,208 and 9,358 F.T.E. students, respectively) with the start-up costs of Irvine and Santa Cruz (which now have enrollments of 3,490 and 2,412, respectively) permits a comparison between expansion of existing facilities and construction of new campuses.[2]

Expansion at Davis

Davis had been primarily the agricultural college of the University, and was redesignated a general campus just before the start of this period. During the period, three new professional schools (medicine, engineering and law) were established and average annual enrollment rose from 2,442 in 1959 to 10,650 during the current year. Total expenditures for capital construction on the Davis campus exclusive of medical facilities, during the period 1958 through 1966 (a two year lag is assumed between the time funds are expended and facilities are equipped and ready for student occupancy) were $102,987,180.[3] This amounted to an incremental average cost of $12,547 per full time equivalent student.

The University, in determining space requirements for construction of facilities, uses a weighting system (not accepted fully by any state agency) which recognizes the greater requirements as a student advances through the doctoral stage. Using this system[4] the weighted average incremental cost per lower division equivalent student was $7,060.

Expansion at Santa Barbara

At Santa Barbara, similar expansion took place, although professional schools were not added (thus reducing total expenditures necessary for high cost programs and facilities). Enrollment rose from 2,870 average annual enrollments in 1959 to 12,228 in 1968. Total capital expenditures during the period 1958-1966 amounted to $82,993,346, and incremental average cost per full time equivalent student of $8,869. Weighted incremental cost per lower division equivalent student was $5,137.

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[1] Letter dated October 2, 1968, from Frank L. Kidner, Vice President-Educational Relations, to Willard B. Spalding, Council Deputy Director.

[2] See Appendices E-4 and E-5 for more detailed analysis.

[3] All capital costs are referred to in terms of constant dollars, either 1966 (Engineering News Record Index 1121) for the period 1958-1966; or 1967 (ENR Index 1070) for the period 1967-1975.

[4] Weightings currently used by the University are: lower division,1.0; upper division, 1.4; first stage graduate students (masters through first-stage doctoral), 3.0; and second stage graduate (doctoral), 6.0.

Construction of A New Campus - Irvine

Capital construction expenditures began for the Irvine campus in 1962, and students were accepted for the first time in 1965. Average annual enrollment has grown from 1,497 in that year to 3,490 in 1968. Capital outlay from 1962 to 1966 totaled $51,972,999, resulting in an average expenditure per student of $14,892 and a weighted average per lower division equivalent student of $8,829. Extending estimated capital costs of reaching an enrollment roughly equivalent to that of Davis and Santa Barbara, or about 10,100 average annual students in 1975-76, according to the five-year capital outlay budget of the University,[1] the total capital expenditure would be $176,473,216, or about $17,472 per student, if all funds requested in the Regents' budget were forthcoming. The weighted average cost per lower division equivalent student would be $8,886.

Construction of A New Campus - Santa Cruz

For the Santa Cruz campus, capital expenditures began with a small amount in 1961, and through 1966 totaled $41,154,993. Students were first admitted at Santa Cruz in 1965, and current average annual enrollment is 2,412. Capital expenditures per student are $17,063; per weighted lower division equivalent student they are $13,375. Extending capital cost estimates to an enrollment level of 8,225 average annual enrollments, to be reached in 1975-76, total capital expenditures will then be $136,210,486 and the average cost per student $16,561, assuming all budgeted funds were forthcoming. Weighted lower division equivalent student per capita cost would be $8,781.

It appears from experience on these four campuses that even with the construction of high cost facilities for new engineering and law schools at Davis, the costs for expanding existing campuses were less than those for building new ones. The obvious needs for basic architectural master planning, and for construction of such non-instructional facilities as heating plants, corporation yards for maintenance and repair work, administration buildings and other service facilities increase the start-up capital costs of new campuses. When existing campuses are expanded, these facilities may also require some expansion, but the basic expenditures have already been made.

Even measured on a cost weighted by the distribution of students, the expansions at Davis and Santa Barbara have been less expensive than the construction of campuses at Irvine and Santa Cruz. By the time the two new campuses reach enrollment levels more nearly equal to those at Santa Barbara and Davis, these costs per weighted student will have declined--substantially at Santa Cruz because of the addition of a large proportion of graduate students, less at Irvine. They will, however, remain somewhat higher than those for expanding Davis and Santa Barbara.

It should be noted that the opening of a new campus, in addition to substantial capital expenditures requires a substantial investment in human resources, in advance hiring of a president and other administrative and instructional staff, in the master planning of an academic program for the campus, etc. The lead time for such hiring and planning is at least two to three years before the first student can be admitted. In addition, during the early years of a campus, it is necessary to accommodate students in smaller classes in order to provide a complete spectrum of courses in a given program; the student/faculty ratio is consequently much lower than for that of an established, mature campus, and the instructional costs per student consequently much higher.

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[1] University of California 1969-1974 Capital Improvement Program, June 21, 1968.

It can be assumed, then, that in addition to higher capital costs of constructing a new campus, operating costs would also be higher for opening a new campus than for expanding an existing one.[1]

On the basis of the capital cost comparisons, however, it appears that accommodation of enrollment growth on existing campuses through various options, when possible, is preferable to building new campuses.

Findings

1. Enrollment in the University more than doubled between 1960 and 1968, averaging 6,168 per year and totaling 49,334. This growth was accommodated partly through construction of two new campuses and partly through substantial expansion of others.

2. Estimated average annual enrollment for 1968-69 is 101,565, including 5,875 Medical and Health Sciences enrollments, and an increment of 5,227 achieved through the 1968 summer quarter at Berkeley and Los Angeles.

3. Projections of undergraduate increase in demand, made by the State Department of Finance, for the period 1968-1977 indicate an average yearly increase of 4,292 three-term average annual enrollments. Total undergraduate enrollment projected for 1977 by the Department is 105,703.

4. Projections of anticipated graduate enrollments are not made by the Department of Finance, but the University plans to increase three-term average annual graduate enrollment from the 1968-69 level of 24,755 to a total of 48,342 in 1977 (exclusive of Medical and Health Sciences enrollments).

5. Total three-term average annual enrollment to be accommodated by the University in 1977 equals 154,045, plus an estimated 9,827 in the Medical and Health Sciences.

6. Present University planning for total undergraduate enrollments on the eight general campuses falls short of accommodating the projected total undergraduate enrollment demand by an increasing number each year, reaching a deficit of 13,334 by 1977.

7. Undergraduate enrollments on university campuses still growing (all but Berkeley and Los Angeles) are planned to increase at an average yearly rate of 8.12%; at this rate, the planned average annual increase (2,588) falls short of the projected average annual increase in demand (4,292) by 1,704 each year. One factor in the University's planning

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[1] Detailed operating cost comparisons based on institution size and age have not been made in this study because of the complexity of such analyses; such comparisons are made extremely difficult by the many and varied sources of income for the University and by the highly interrelated activities of research, instruction, and public service carried on by the University, requiring expenditures to be made from many revenue sources.

which reduces its ability to accommodate total projected demand during the period is the decrease of undergraduate enrollments at Berkeley and Los Angeles by a total of 6,988, in order to accommodate increased graduate enrollment growth at those two campuses and still remain within the maximum planned enrollment ceiling.

8. The University's planned ability to accommodate total annual enrollment demand in the future has been increased by approximately 13.3% through use of year-round operations. Two campuses are currently operating on a year-round basis, with one scheduled to begin in 1969, one in 1970, and four in 1971. By 1977, the summer quarter (with enrollments planned to equal 40% of the fall-winter-spring quarter average), will yield an increment of 16,998, and permit University undergraduate enrollments to reach a total of 98,681.

9. The University has historically made little use of the evening and Saturday morning hours for scheduling classes (1.8 hours have been used on a University-wide average out of a possible 29 hours available from 5 to 10 p.m. Monday through Friday, and 8 a.m. to 12 noon on Saturday).

10. Planned maximum enrollment ceilings have been established for all campuses; two (Berkeley and Los Angeles) are presently operating at their ceilings, and one (Davis) is planned to reach its ceiling in 1974. Other campuses will not reach their ceilings during the period of this study.

11. An increase in average annual undergraduate growth rates on those campuses still growing--from 8.12% to 10.16%--would accommodate the excess undergraduate demand. Methods which could be used to achieve this increased intake of students include:

(a) increasing planned summer quarter operations, from 40% to a somewhat higher level;

(b) extending the teaching day from the traditional 8 a.m. to 5 p.m., five-day week, to include 5 p.m. to 10 p.m. and Saturday (8 a.m. to 12 n.);

(c) speeding up the capital construction program to provide additional facilities sooner than now planned on those campuses still growing;

(d) increasing maximum planned enrollment ceilings on those campuses at, or scheduled to reach, their ceilings during the period; and

(e) constructing one or both of the new campuses for which a "definite ultimate need" was found by the Council in 1964.

12. Present University policies and procedures for redirection of students applying for admission to campuses at their capacities to those at which space is available assure that individual campuses will not be over-burdened by excessive growth, and conversely, others will not operate at less than annual capacities.

13. The University's experience in the capital development necessary to expand the Davis and Santa Barbara campuses shows that such expansion was substantially less costly than the construction of new campuses at Irvine and Santa Cruz.

14. Although the Coordinating Council in 1964 stated that advance acquisition of sites for either of the two campuses for which a definite ultimate need was found to exist might go forward, the Regents to date have not actively sought such sites.

Conclusion

Because of the possibilities of accommodating total projected undergraduate enrollment demand by means of methods (a) through (d) in 11 above, and because it appears to be less costly in terms of capital expentures to expand existing facilities than to build completely new campuses, no additional campuses need be recommended for the University between 1968 and 1973, and initiating construction of new campuses for which a "definite ultimate need" was found in 1964 is not necessary prior to 1973; the advance acquisition of sites for either of these campuses may still be considered by the Council, upon request of the Regents.

CHAPTER VI

PUBLIC JUNIOR COLLEGES

Introduction

Past surveys of the need for new centers of higher education have not emphasized to any significant degree the demands for new Junior College facilities. Attention has been directed instead to the question of Junior College districting and the provision for initial service to an area. Demands for initial Junior College services to nearly all geographical areas of the state have now been met. Recent years have seen marked increases in State participation in Junior College capital outlay programs (as well as federal monies for similar purposes). The multi-campus Junior College district is becoming common. Data are now available which enable a much more comprehensive look at the need for new facilities than has been the case in previous years.

All of the above support the need, and feasibility, for an intensive examination of the statewide requirements for new Junior College facilities in the next ten years. This is attempted in the following pages. Findings of this investigation warrant close consideration by State and local officials charged with planning for and providing Junior College services.

Previous Surveys. One of the first studies concerned with the need for Junior Colleges, the 1948 Strayer Report[1], pointed out localities in the state where Junior Colleges had not been established. The Report found that the following counties then without a Junior College were shown to have an enrollment potential that would justify the establishment of a Junior College: Alameda, Contra Costa, Merced, Kings, Fresno, Tehama-Shasta, and Mendocino-Lake. The 1955 Restudy[2] merely recommended that ". . . active encouragement be given by the State Superintendent of Public Instruction, the State Department of Education, the State Board of Education, and other appropriate agencies to the establishment of new Junior Colleges in populous areas with adequate resources not now adequately served." The following areas were to receive careful study with respect to the establishment of new Junior Colleges according to the report:

Los Angeles County: Arcadia-Monrovia-Alhambra-El Monte
Alameda County: Berkeley-Albany-Emeryville and
  Hayward-San Leandro-Alameda City
San Diego County: Grossmont-Sweetwater
Southern San Mateo County

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[1] Monroe E. Deutsch, Aubrey A. Douglass, and George D. Strayer, A Report of a Survey of the Needs of California in Higher Education. University of California Press, Berkeley, 1948.

[2] T. R. McConnell, T. C. Holy and H. H. Semans, A Restudy of the Needs for California in Higher Education, California State Department of Education, Sacramento, 1955, p. 45.

Santa Clara County: Los Gatos-Palo Alto-Mountain View-Sunnyvale
Riverside County: Banning-Beaumont-Palm Springs
Colusa-Glenn-Butte Counties
Santa Cruz County: Santa Cruz-Watsonville
Merced-Madera Counties
Siskiyou-Modoc Counties
Lake-Mendocino Counties

Greater attention was given to the need for Junior College facilities in the 1957 Additional Centers study.[1] This report listed some 53 high school districts which should be included in new Junior College districts.

In 1959 the Master Plan[2] recommended--as had the Restudy--that the state give encouragement to making more Junior College facilities available. It found a need for twenty-two new Junior Colleges in areas not then adequately served.[3] Thus all of these surveys confined themselves to the provision for initial Junior College facilities and the related problem of districting.

The Coordinating Council's 1964 report[4] on California's needs for additional centers of public higher education pointed out the progress made during the period 1959-1964 but contained no recommendations for additional Junior College facilities.

State Participation in Junior College Capital Outlay. As noted at the outset the State has expanded its role in providing financial support for Junior College capital expenditures. Beginning in 1961 with an appropriation of $5 million for capital purposes, the level of State support has gradually increased until under present legislation the state can provide, on a statewide basis, approximately 50% of the annual expenditure for all Junior College facilities except dormitories, student centers other than cafeterias, stadia, the improvement of site for student or staff parking, or single purpose auditorium. Various methods of allocation were used to distribute state funds to 1967, none of which was completely satisfactory. In 1967, the Legislature directed the Council to study the program of state aid for Junior College construction assistance, to recommend changes, and to prepare statutory proposals to carry out the recommendations.[1]

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[1] H. H. Semans, T. C. Holy, et al, A Study of the Need for Additional Centers of Public Higher Education in California, California State Department of Education, Sacramento, 1957.

[2] A Master Plan for Higher Education in California, 1960-1975, prepared by the Master Plan Team for the Liaison Committee of the Regents of the University of California and the State Board of Education, Sacramento, 1960.

[3] In an additional recommendation related to the financing of Junior Colleges rather than the need for new facilities, the report recommended that all territory of the state not then included within districts operating Junior Colleges be brought into Junior College districts as rapidly as possible. As of July, 1968, 96% of the state assessed valuation and 77% of the state's land area was included in Junior College districts. Some 99% of the state's population is in these districts.

[4] California's Needs for Additional Centers of Public Higher Education, CCHE (December, 1964) pp. 23-4.

In compliance with the legislative resolution the Council developed and presented to the Legislature a proposed program of State support for Junior College capital construction. The Council program, essentially unchanged, was enacted into law as the Junior College Construction Act of 1967.[2] The main elements of the Act are:

1. Provides funds for the acquisition and improvement of sites; planning, construction, reconstruction, or remodeling of classrooms, laboratories, libraries, administrative or maintenance facilities; and initial equipment. Funds are not provided for dormitories, student centers (other than cafeterias), stadia, single-purpose auditoriums, or parking.

2. Each district is required to develop a 10-year master plan for construction. The plan must be approved by the Board of Governors for California Community Colleges. The plan must be based on such factors as an academic plan, enrollment projections developed by the Department of Finance, current enrollment capacity based upon space and utilization standards adopted by the Board of Governors, and an annual inventory of existing facilities.

3. Each district is required to submit an application for each project for which State funds are requested. A project must be a part of the district's 10-year master plan and must be approved by the Board of Governors and by the Department of Finance.

4. When projects have been approved by both the Department of Finance and the Board of Governors, the district prepares and submits preliminary project plans and working drawings for approval and cost determination.

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[1] Senate Concurrent Resolution 14, See Appendix F-3.

[2] *Education Code*, Sec. 20050-20083.

TABLE VI-1

CURRENT AND PROJECTED DAY-GRADED ENROLLMENTS FOR CALIFORNIA PUBLIC JUNIOR COLLEGES FALL 1967 and FALL 1977

District and/or College	Actual Enrollment 1967	Projected Enrollment 1977	Increase	
			Number	Percent
ALLAN HANCOCK	2010	3822	1812	90
ANTELOPE VALLEY	1464	3278	1814	124
BARSTOW	544	1436	892	164
BUTTE	114	3298	3184	-
CABRILLO	2500	5531	3031	121
CERRITOS	6986	11677	4691	67
CHAFFEY	3385	6281	2896	86
CITRUS	2745	4925	2180	79
COACHELLA VALLEY	1253	2548	1295	103
COALINGA	685	955	270	39
COLLEGE OF THE SEQUOIAS	2592	4283	1691	65
COMPTON	2681	4790	2109	79
CONTRA COSTA (1)	9160	15770	6601	72
Contra Costa College	3272	-	-	-
Diablo Valley College	5888	-	-	-
EL CAMINO	8651	12535	3884	45
FOOTHILL (1)	8223	15198	6975	85
De Anza College	3110	-	-	-
Foothill College	5113	-	-	-
FREMONT-NEWARK	780	4979	4199	538
GAVILAN	775	2438	1663	215
GLENDALE	2980	4176	1196	40
GROSSMONT	3790	7088	3298	87
HARTNELL	2125	3719	1594	75
IMPERIAL	1307	2261	954	73
KERN (1)	5502	9533	4031	73
Bakersfield College	4796	-	-	-
Porterville College	706	-	-	-
LASSEN	556	977	421	76
LONG BEACH	9347	14768	5421	58
LOS ANGELES CITY (1)	42980	79365	36385	85
East Los Angeles	5768	-	-	-
City College	10233	-	-	-
Harbor College	4462	-	-	-
Pierce College	8150	-	-	-
Southwest College	656	-	-	-
Trade-Technical College	4692	-	-	-
Valley College	9019	-	-	-
LOS RIOS (1)	12723	20776	8053	63
American River	5931	-	-	-
Sacramento City	6792	-	-	-
MARIN	3774	6732	2958	78
MERCED	1634	3432	1798	110
MONTEREY PENINSULA	2426	3938	1512	62
MT. SAN ANTONIO	6652	10988	4336	65
MT. SAN JACINTO	622	1768	1146	184
NAPA	1590	2990	1400	88
NORTH ORANGE COUNTY (1)	10744	22978	12234	114
Cypress Junior College	2189	-	-	-
Fullerton Junior College	8555	-	-	-
OCEANSIDE-CARLSBAD	1024	1863	839	82
ORANGE COAST	9010	23304	14294	158
Golden West College	2488	11500	9012	362
Orange Coast College	6522	11804	5282	81
PALO VERDE	231	459	228	99
PALOMAR	2527	5648	3121	124
PERALTA (1)	9156	14950	5794	63
Laney College	3774	-	-	-
Merritt College	5382	-	-	-
PASADENA	8110	10798	2688	33

TABLE VI-1 (Continued)

District and/or College	Actual Enrollment 1967	Projected Enrollment 1977	Increase	
			Number	Percent
REDWOODS	1558	3705	2147	138
RIO HONDO	3962	7694	3732	94
RIVERSIDE	3780	6880	3100	82
SADDLEBACK	-	5663	5663	-
SAN BERNARDINO VALLEY	5025	8714	3689	73
SAN DIEGO (1)	9826	17947	8121	83
City College	4407 (2)	-	-	-
Mesa College	5419	-	-	-
SAN FRANCISCO	9625	13647	4022	42
SAN JOAQUIN DELTA	4602	7492	2890	63
SAN JOSE	4626	9054	4428	96
SAN LUIS OBISPO	1315	2624	1309	99
SAN MATEO	8730	16007	7277	83
SANTA ANA	3574	7190	3616	101
SANTA BARBARA	2952	5469	2517	85
SANTA CLARITA VALLEY (2)	-	1581	1581	-
SANTA MONICA	6906	9843	2937	43
SHASTA	2302	4386	2084	91
SIERRA	1921	3339	1418	74
SISKIYOU	554	1142	588	106
SOLANO	2796	4624	1828	65
SONOMA	3155	5664	2509	79
SOUTH COUNTY	5430	9106	3676	68
STATE CENTER	7303	12361	5058	69
Fresno City College	5828	-	-	-
Reedley College	1475	-	-	-
SWEETWATER	2701	5182	2481	92
VENTURA	4709	10810	6101	130
Ventura College	3541	-	-	-
Moorpark College	1168	-	-	-
VICTOR VALLEY	566	1541	975	172
WEST KERN	522	630	108	21
WEST VALLEY	3656	8481	4825	132
YOSEMITE	4079	6858	2779	68
YUBA	2608	4315	1707	65
STATE TOTAL	302,141	558,204	256,063	84.7

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(1) Additional colleges planned by 1977, therefore breakdown by college for 1977 not shown.

(2) Includes 642 day-graded students reported for Evening College.

5. Any Federal funds received for the project are deducted and the remaining cost of the project is divided between the state and local district on an equalized basis.

6. State funds, when appropriated by the Legislature, are authorized in stages, as needed, for preliminary planning, construction and equipping.

7. Each local board is authorized to levy a district tax sufficient to cover the annual district share of an approved project.

Growth Trends in the Junior Colleges

The enrollment of day-graded[1] students in the public Junior Colleges of California in the fall term 1967 are shown in Table VI-1 along with the enrollment projected for fall 1977.[2] The projections for each district are made by the State Department of Finance for a ten-year period as specified by the Junior College Construction Act of 1967. When a district contains more than one Junior College the projected day-graded enrollment for the district has been divided among the Junior Colleges of the district. However, as noted in the table, if a district plans to add new campuses to those in existence as of fall 1967, the projected enrollments by campus have been omitted.

The table shows that by 1977 the day-graded enrollment for the state as a whole will increase by 256,063 or 85%. In individual districts the percent increase is expected to vary as shown below:

Percent of Increase	Number of Districts*
0-50%	7
51-75	19
76-100	22
101-150	11
151-200	4
Above 200	3

(*Not including two existing districts without campuses in 1967)

Eighteen of the 65 districts are expected to double their enrollments by 1977, 26 will have an increase of less than 75%, and the remainder, 22, will have enrollment increases from 76-100%.

The 256,063 increase in day-graded students from 1967 to 1977 is somewhat greater than the 188,940 increase during the previous decade. However, the projections of high school graduates and the 18-24 year age-group as shown in Chapter II indicate that on a statewide basis Junior College enrollment may level off after 1977, and may actually decline during the period 1980-85.

The Enrollment Capacity of the Junior Colleges Today and the Additional Capacity Needed by 1977

The enrollment capacity of California's public Junior Colleges in terms of the number of day-graded students that could be accommodated in the 1967 fall term is shown in Table VI-2.[3] The table compares this capacity with the day-graded enrollment for the fall 1967 and indicates the excess (or deficit) capacity. In addition, the table provides the percent of capacity used at that time.

The data of Table VI-2 show that on a statewide basis the enrollment capacity in the fall of 1967 exceeded the enrollment by 78,556 day-graded

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[1] A day-graded student is one registered in at least one graded course scheduled to commence prior to 4:30 P. M.

[2] A similar table based on the actual and projected weekly-student-contact hours (WSCH) derived from the day-graded students is shown as Table 1 in Appendix F-1.

[3] A similar table based on weekly-student contact hours is shown as Table 2 in Appendix F-1.

TABLE VI-2

DAY-GRADED ENROLLMENT IN CALIFORNIA'S PUBLIC JUNIOR COLLEGES COMPARED WITH THEIR DAY-GRADED ENROLLMENT CAPACITY FALL, 1967

District and/or College	Enrollment Fall 1967	Enrollment Capacity		
		Existing Fall 1967	Capacity Not Used[1]	Percent of Capacity Used
ALLAN HANCOCK	2010	3741	1731	53.7
ANTELOPE VALLEY	1464	3786	2322	38.7
BARSTOW	544	781	237	69.7
BUTTE[2]	114	-	-	-
CABRILLO	2500	6105	3605	41.0
CERRITOS	6986	6430	(556)	108.6
CHAFFEY	3385	4669	1284	72.5
CITRUS	2745	5825	3080	47.1
COACHELLA VALLEY	1253	1425	172	87.9
COALINGA	685	1243	558	55.1
COLLEGE OF THE SEQUOIAS	2592	3834	1242	67.6
COMPTON	2681	4777	2096	56.1
CONTRA COSTA	9160	9158	(2)	100.0
Contra Costa College	3272	4468	1196	73.2
Diablo Valley College	5888	4690	(1198)	125.5
EL CAMINO	8651	10957	2306	79.0
FOOTHILL	8223	11875	3652	69.21
De Anza College	3110	6062	2952	51.3
Foothill College	5113	5813	700	88.0
FREMONT-NEWARK[2]	780	651	(129)	119.9
GAVILAN	775	643	(132)	120.5
GLENDALE	2980	4711	1731	63.3
GROSSMONT	3790	8503	4713	44.6
HARTNELL	2125	2436	311	87.2
IMPERIAL	1307	1883	576	69.4
KERN	5502	5726	224	96.1
Bakersfield College	4796	4986	190	96.2
Porterville College	706	740	34	95.4
LASSEN	556	467	(89)	119.1
LONG BEACH	9347	8498	(849)	110.0
LOS ANGELES CITY	42980	53052	10072	81.0
East Los Angeles	5768	6684	916	86.3
City College	10233	10763	530	95.1
Harbor College	4462	3979	(483)	112.1
Pierce College	8150	9472	1322	86.0
Southwest College	656	2052	1396	32.0
Trade-Technical College	4692	6766	2074	69.3
Valley College	9019	13336	4317	67.6
LOS RIOS	12723	13627	904	93.4
American River	5931	7577	1646	78.3
Sacramento City	6792	6050	(742)	112.3
MARIN	3774	4618	844	81.7
MERCED	1634	1693	59	96.5
MONTEREY PENINSULA	2426	3884	1458	62.5
MT. SAN ANTONIO	6652	11625	4973	57.2
MT. SAN JACINTO	622	1790	1168	34.7
NAPA	1590	2120	530	75.0
NORTH ORANGE COUNTY	10744	9501	(1243)	113.0
Cypress Junior College	2189	2292	103	95.5
Fullerton Junior College	8555	7209	(1346)	118.7
OCEANSIDE-CARLSBAD	1024	2427	1403	42.2
ORANGE COAST	9010	9902	892	91.0
Golden West College	2488	2621	133	94.9
Orange Coast College	6522	7281	759	89.6
PALO VERDE	231	506	275	45.7
PALOMAR	2527	5520	2993	45.8
PERALTA	9156	9897	741	92.5
Laney College[2]	3774	4164	390	90.6
Merritt College[2]	5382	5733	351	93.9
PASADENA	8110	9270	1160	87.5

TABLE VI-2 (Continued)

District and/or College	Enrollment Fall 1967	Enrollment Capacity: Existing Fall 1967	Enrollment Capacity: Capacity Not Used[1]	Enrollment Capacity: Percent of Capacity Used
REDWOODS	1558	1935	377	80.5
RIO HONDO	3962	6222	2260	63.7
RIVERSIDE	3780	4341	561	87.1
SADDLEBACK[3]	-	-	-	-
SAN BERNARDINO VALLEY	5025	6934	1909	72.5
SAN DIEGO	9826	11801	1975	83.2
City College	4407[a]	4259	(148)	103.5
Mesa College	5419	7542	2123	71.9
SAN FRANCISCO	9625	9755	130	98.7
SAN JOAQUIN DELTA[2]	4602	4884	282	94.2
SAN JOSE	4626	4942	316	93.6
SAN LUIS OBISPO	1315	3907	2592	33.7
SAN MATEO	8730	7730	(1000)	113.0
SANTA ANA	3574	5372	1798	66.5
SANTA BARBARA	2952	3054	102	96.7
SANTA CLARITA[3]	-	-	-	-
SANTA MONICA	6906	5974	(932)	115.6
SHASTA	2302	3163	861	72.8
SIERRA	1921	2552	631	75.3
SISKIYOU	554	767	213	72.2
SOLANO[2]	2796	2816	20	99.3
SONOMA	3155	4972	1817	63.5
SOUTH COUNTY	5430	11048	5618	49.1
STATE CENTER	7303	7603	300	96.1
Fresno City College	5828	5815	(13)	100.2
Reedley College	1475	1788	313	82.5
SWEETWATER	2701	4290	1589	63.0
VENTURA	4709	6966	2257	67.6
Ventura College	3541	4884	1343	72.5
Moorpark College	1168	2082	914	56.1
VICTOR VALLEY	566	1282	716	44.2
WEST KERN	522	956	434	54.6
WEST VALLEY	3656	3037	(619)	120.4
YOSEMITE	4079	4088	9	99.8
YUBA	2608	2635	27	99.0
STATE TOTAL	302,141	380,582	84,106[b]	79.4

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[1] Existing capacity minus enrollment. Deficit capacity is shown in parenthesis.
[2] Temporary facilities.
[3] No campus in 1967.

[a] Includes 642 reported for Evening College.
[b] On an individual district basis. On a statewide basis the capacity not used is 78,555 (380,582-302,141)

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students, or by 26%. In terms of individual colleges, 67, or 83%, had excess capacity, and this excess capacity amounts to 84,106 students. Ranges for the percent of capacity used and the number of colleges falling within each range are shown below. About one-half (48%) of the districts used 75% or less of their existing capacity.

Percentage of Capacity Used	Number of Colleges
25-50	12
51-75	27
76-100	28
Above 100	14

Many Junior Colleges had capacity either under construction or funded in the fall of 1967 (not shown in Table VI-2). In Table VI-3[1] this additional capacity has been added to the fall 1977 capacity and the total compared with the enrollment projected for 1977. This comparison indicates what additional capacity will be needed by each district to meet the enrollment demands of 1977. As shown in Table VI-3, seventeen, or 25% of the districts will have excess capacity in 1977 and should not need additional capacity in order to meet their projected enrollments. The remaining 51 districts will require additional capacity to accommodate approximately 146,000 day-graded students.

It should be pointed out that though this report indicates a great deal of improvement is required in the planning and providing of junior college facilities, much is already going forward which will bring demand for programs more closely in line with the orderly provision for physical plants. The above mentioned Junior College Construction Act of 1967 established criteria for State funding of projects which contribute to more orderly planning. In great measure "self-correcting" processes are now at work. Further, the organization of the Board of Governors of the California Community Colleges gives promise of increased statewide leadership in planning and direction. Finally, reports such as this present survey are serving to focus on existing and future plans of Junior Colleges in a comprehensive sense; this has not been the case in the past.

Options Available to Junior Colleges to Provide Additional Enrollment Capacity

Though plant capacity data indicate that there is at present sufficient space to accommodate 428,000 day-graded students, projected demand by 1977 is for about 558,000 day-graded students--some 130,000 above capacity.[2]

Several options in the development of policies to meet anticipated enrollment increases were considered in Chapter I and in the discussions concerning the California State Colleges and the University of California. Certain of these can be considered for application in individual Junior College situations.

First, there are two primary choices open to any district to accommodate additional enrollments: to provide for additional capacity at an established college or to establish a new institution. The former may be accomplished by instituting year-round operations, by building additional facilities or by other devices[3] such as more Saturday classes. Redirecting students to other Junior Colleges not in the district is at present feasible only in isolated cases.

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[1] A similar table based on weekly-student-contact hours is included in Appendix F-1 Table 3.

[2] When individual colleges are considered, capacity for an additional 145,000 is needed by 1977.

[3] Evening programs could be expanded in some Junior Colleges.

TABLE VI-3

THE ADDITIONAL CAPACITY REQUIRED TO MEET THE DAY-GRADED ENROLLMENTS PROJECTED FOR CALIFORNIA PUBLIC JUNIOR COLLEGES IN 1977 BEYOND THE CAPACITY NOW EXISTING, FUNDED OR UNDER CONSTRUCTION WITHOUT YEAR-ROUND OPERATION

District and/or College	Existing Capacity 1967^1	Capacity Under Construction	Capacity Funded	Total Capacity Available	Projected Enrollment 1977^2	Additional Capacity Needed^3
ALLAN HANCOCK	3741	102	-	3843	3822	(21)
ANTELOPE VALLEY	3786	-	326	4112	3278	(834)
BARSTOW	781	-	-	781	1436	655
BUTTE	-	-	-	-	3298	3298
CABRILLO	6105	-	-	6105	5531	(574)
CERRITOS	6430	1615	55	8100	11677	3577
CHAFFEY	4669	825	-	5494	6281	787
CITRUS	5825	-	846	6671	4925	(1746)
COACHELLA VALLEY	1425	-	-	1425	2548	1123
COALINGA	1243	-	-	1243	955	(288)
COLLEGE OF THE SEQUOIAS	3834	-	-	3834	4283	449
COMPTON	4777	-	-	4777	4790	13
CONTRA COSTA	9158	-	-	9158	15770	6612
Contra Costa College	4468	-	-	4468	-	-
Diablo Valley College	4690	-	-	4690	-	-
EL CAMINO	10957	58	2568	13583	12535	(1048)
FOOTHILL	11875	-	447	12322	15198	2846
De Anza College	6062	-	447	6509	-	-
Foothill College	5813	-	-	5813	-	-
FREMONT-NEWARK	651	-	-	651	4979	4328
GAVILAN	643	329	-	972	2438	1466
GLENDALE	4711	298	-	5009	4176	(833)
GROSSMONT	8503	-	-	8503	7088	(1415)
HARTNELL	2436	-	-	2436	3719	1283
IMPERIAL	1883	-	-	1883	2261	378
KERN	5726	-	326	6052	9533	3481
Bakersfield College	4986	-	326	5312	-	-
Porterville College	740	-	-	740	-	-
LASSEN	467	-	-	467	977	510
LONG BEACH	8498	110	632	9240	14768	5528
LOS ANGELES CITY	53052	1140	2764	56956	79365	22409
East Los Angeles	6684	-	28	6712	-	-
City College	10763	-	-	10763	-	-
Harbor College	3979	-	2736	6715	-	-
Pierce College	9472	720	-	10192	-	-
Southwest College	2052	420	-	2472	-	-
Trade-Technical College	6766	-	-	6766	-	-
Valley College	13336	-	-	13336	-	-
LOS RIOS	13627	135	25	13787	20776	6989
American River	7577	-	-	7577	-	-
Sacramento City	6050	135	25	6210	-	-
MARIN	4618	-	1670	6288	6732	444
MERCED	1693	-	502	2195	3432	1237
MONTEREY PENINSULA	3884	2014	396	6294	3938	(2356)
MT. SAN ANTONIO	11625	-	-	11625	10988	(637)
MT. SAN JACINTO	1790	108	460	2358	1768	(590)
NAPA	2120	-	599	2719	2990	271
NORTH ORANGE COUNTY	9501	4173	-	13674	22978	9304
Cypress Junior College	2292	3667	-	5959	-	-
Fullerton Junior College	7209	506	-	7715	-	-

TABLE VI-3 - Continued

District and/or College	Existing Capacity 1967[1]	Capacity Under Construction	Capacity Funded	Total Capacity Available	Projected Enrollment 1977[2]	Additional Capacity Needed[3]
OCEANSIDE-CARLSBAD	2427	-	20	2447	1863	(584)
ORANGE COAST	9902	-	1501	11403	23304	11901
Golden West College	2621	-	1501	4122	-	-
Orange Coast College	7281	-	-	7281	-	-
PALO VERDE	506	-	32	538	459	(79)
PALOMAR	5520	-	-	5520	5648	128
PERALTA	9897[c]	-	13449[ab]	13449	14950	1501
Laney College	4164[c]	-	6383[b]	6383	-	-
Merritt College	5733[c]	-	2841[b]	2841	-	-
PASADENA	9270	1477	-	10747	10798	51
REDWOODS	1935	-	-	1935	3705	1770
RIO HONDO	6222	-	- [d]	6222	7694	1472
RIVERSIDE	4341	478	(-160)	4659	6880	2221
SADDLEBACK	-	-	-	-	5663	5663
SAN BERNARDINO VALLEY	6934	-	- [e]	6934	8714	1780
SAN DIEGO	11801	-	1774	13575	17947	4372
City College	4259	-	-	4259	-	-
Mesa College	7542	-	1222	8764	-	-
SAN FRANCISCO	9755	257	1664	11676	13647	1971
SAN JOAQUIN DELTA	4884	-	-	4884	7492	2608
SAN JOSE	4942	-	-	4942	9054	4112
SAN LUIS OBISPO	3907	-	-	3907	2624	(1283)
SAN MATEO	7730	5629	1937	15296	16007	711
SANTA ANA	5372	-	339	5711	7190	1479
SANTA BARBARA	3054	-	734	3788	5469	1681
SANTA CLARITA	-	-	-	-	1581	1581
SANTA MONICA	5974	-	237	6211	9843	3632
SHASTA	3163	-	-	3163	4386	1223
SIERRA	2552	-	-	2552	3339	787
SISKIYOU	767	-	150	917	1142	225
SOLANO	2816	-	-	2816	4624	1808
SONOMA	4972	-	125	5097	5664	567
SOUTH COUNTY	11048	-	-	11048	9106	(1942)
STATE CENTER	7603	731	649	8983	12361	3378
Fresno City College	5815	665	-	6480	-	-
Reedley College	1788	66	649	2503	-	-
SWEETWATER	4290	-	89	4379	5182	803
VENTURA	6966	-	-	6966	10810	3844
Ventura College	4884	-	-	4884	-	-
Moorpark College	2082	-	-	2082	-	-
VICTOR VALLEY	1282	344	-	1626	1541	(85)
WEST KERN	956	-	-	956	630	(326)
WEST VALLEY	3037	1307	1237	5581	8481	2900
YOSEMITE	4088	-	-	4088	6858	2770
YUBA	2635	221	105	2961	4315	1354
STATE TOTAL	380,582	21,351	35,498	427,534	558,204	145,311[f]

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[1] From Table 2

[2] From Table 1

[3] Excess capacity is shown in parenthesis

[a] Includes 4213 funded at proposed Alameda and Berkeley campuses

[b] To replace leased facility

[c] Leased facilities

[d] Building to be funded will result in another building being torn down. Building to be torn down is larger than the one being funded.

[e] Includes 552 at proposed Miramar Campus

[f] On a district basis. On a statewide basis the capacity is 130,670 (558,204 - 427,534).

Data used in applying these options are those available on a statewide basis plus those provided by local districts in their 10-year plans for new constructions. There is some possibility that other data, available only through intensive study of specific districts, might modify the conclusions reached here. However, since both the Board of Governors and the Department of Finance must review and approve specific projects before State funds are expended, locally derived data can be taken into account when the reviews occur.

Providing Additional Capacity Through Year-Round Operation. A few Junior Colleges are finding that through the establishment of a year-round academic calendar and the operation of the institution on a continuing basis, they are able to accommodate more students and postpone the date when new facilities will be required. Further, they have found that when additional facilities are finally necessary to meet projected enrollments, such facilities are also influenced by year-round operation--less instructional space is required for total enrollments under year-round operation, than during the traditional academic year.

Table VI-4 illustrates the effect of year-round operation, wherein the summer term enrollment is 40% of the fall term enrollment, at those Junior Colleges where projected 1977 enrollments exceed their capacity (as shown in Table VI-3). This, of course, assumes year-round operation is found desirable at each Junior College. The value of year-round operation must be assessed for each individual Junior College, such evaluation to take note of college location, clientele, programs of other colleges in the summer, etc. The data show that when the summer term enrollment is 40% of the fall term enrollment, and when applied to these Junior Colleges, year-round operation is estimated to potentially reduce the additional day-graded student enrollment capacity required in California for 1977 from 145,111 to 91,271--a reduction of 37%. Though year-round operations is one of several methods of accommodating increased enrollments, no finding of this section is dependent solely on institutions of year-round operation as such.

Providing Additional Capacity Through Either Adding to Existing Facilities or Building New Campuses. The choice between expanding existing facilities or the establishment of a new college to provide additional enrollment capacity should be made only after careful consideration of factors such as the maximum campus enrollment considered desirable from an educational and cost viewpoint, availability of land for expansion or for a new college, convenience to the student in terms of commuting distance, effects upon district organization, the location of a new college within the district, and the plans and facilities of adjoining districts. Some consideration should also be paid to enrollment projections extending beyond a ten-year period. The more important of these factors are considered in the following sections.

A. Consideration of Maximum and Minimum College Size. The establishment of enrollment limits for a college is deemed necessary for the proper planning of its curriculum and physical plant development. Statewide planning and orderly growth also mandate the establishment of such limits, for they have an important bearing on the decision as to how many Junior Colleges will be needed in 1977.

TABLE VI-4

THE ADDITIONAL ENROLLMENT CAPACITY REQUIRED IN 1977 IF YEAR-ROUND OPERATIONS WERE INSTITUTED IN THOSE JUNIOR COLLEGES WHOSE PROJECTED 1977 ENROLLMENTS EXCEED THEIR CAPACITY

District and/or College	1977 Projected Enrollment	Capacity Available[1]		Additional Capacity Needed	
		Without Year-Round Operation	With Year-Round Operation	Without Year-Round Operation	With Year-Round Operation[2]
(1)	(2)	(3)	(4)	(5)	(6)
BARSTOW	1436	781	884	655	478
BUTTE[3]	3298	-	-	3298	2859
CERRITOS	11677	8100	9177	3577	2168
CHAFFEY	6281	5494	6225	787	48
COACHELLA VALLEY	2548	1425	1614	1123	810
COLLEGE OF THE SEQUOIAS	4283	3834	4344	449	None
COMPTON	4790	4777	5412	13	None
CONTRA COSTA	15770	9158	10376	6612	4677
Contra Costa College	-	4468	5062	-	-
Diablo Valley College	-	4690	5314	-	-
FOOTHILL	15198	12322	13961	2876	1072
De Anza College	-	6509	7375	-	-
Foothill College	-	5813	6586	-	-
FREMONT-NEWARK	4979	651	738	4328	3677
GAVILAN	2438	972	1101	1466	1159
HARTNELL	3719	2436	2760	1283	831
IMPERIAL	2261	1883	2133	378	111
KERN	9533	6052	6857	3481	2320
Bakersfield College	-	5312	6018	-	-
Porterville College	-	740	839	-	-
LASSEN	977	467	529	510	388
LONG BEACH	14768	9240	10468	5528	3728
LOS ANGELES CITY	79365	56956	64531	22409	12861
East Los Angeles	-	6712	7605	-	-
City College	-	10763	12195	-	-
Harbor College	-	6715	7604	-	-
Pierce College	-	10192	11547	-	-
Southwest College	-	2472	2801	-	-
Trade-Technical College	-	6766	7666	-	-
Valley College	-	13336	15110	-	-
LOS RIOS	20776	13787	15620	6989	4470
American River	-	7577	8585	-	-
Sacramento City	-	6210	7036	-	-
MARIN	6732	6288	7124	444	None
MERCED	3432	2195	2487	1237	819
NAPA	2990	2719	3081	271	None
NORTH ORANGE COUNTY	22978	13674	15492	9304	6490
Cypress Junior College	-	5959	6752	-	-
Fullerton Junior College	-	7715	8741	-	-
ORANGE COAST	23304	11403	12920	11901	9003
Golden West College	-	4122	4670	-	-
Orange Coast College	-	7281	8249	-	-

TABLE VI-4 Continued

District and/or College (1)	1977 Projected Enrollment (2)	Capacity Available[1]		Additional Capacity Needed	
		Without Year-Round Operation (3)	With Year-Round Operation (4)	Without Year-Round Operation (5)	With Year-Roung Operation[2] (6)
PALOMAR	5648	5520	6254	128	None
PERALTA	14950	13449	15238	1501	None
Laney College	-	-	-	-	-
Merritt College	-	-	-	-	-.
PASADENA	10798	10747	12176	51	None
REDWOODS	3705	1935	2192	1770	1312
RIO HONDO	7694	6222	7050	1472	558
RIVERSIDE	6880	4659	5279	2221	1388
SADDLEBACK	5663	0	0	5663	4910
SAN BERNARDINO VALLEY	8714	6934	7856	1780	744
SAN DIEGO	17947	13575[a]	15380	4372	2225
City College	-	4259	4825	-	-
Mesa College	-	8764	9930	-	-
SAN FRANCISCO	13647	11676	13229	1971	362
SAN JOAQUIN DELTA	7492	4884	5533	2608	1698
SAN JOSE	9054	4942	5599	4112	2995
SAN MATEO	16007	15296	17330	711	None
SANTA ANA	7190	5711	6471	1479	623
SANTA BARBARA	5469	3788	4292	1681	1020
SANTA CLARITA	1581	0	0	1581	1371
SANTA MONICA	9843	6211	7037	3632	2433
SHASTA	4386	3163	3584	1223	695
SIERRA	3339	2552	2891	787	388
SISKIYOU	1142	917	1039	225	89
SOLANO	4624	2816	3191	1808	1242
SONOMA	5664	5097	5775	567	None
STATE CENTER	12361	8983	10178	3378	1893
Fresno City College	-	6480	7342	-	-
Reedley College	-	2503	2836	-	-
SWEETWATER	5182	4379	4961	803	192
VENTURA	10810	6966	7892	3844	2530
Ventura College	-	4884	5534	-	-
Moorpark College	-	2082	2359	-	-
WEST VALLEY	8481	5581	6323	2900	1871
YOSEMITE	6858	4088	4632	2770	1930
YUBA	4315	2961	3354	1354	833
STATE TOTALS	482,977	337,666	382,570	145,311	91,271

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[1] Capacity available with year-round operations derived by multiplying capacity without year-round operation by 113.3%. Under perfectly balanced enrollment in all term year-round operations will increase capacity by 33 1/3%. An increase of 13.3% is derived by assuming the summer term enrollment will be only 40% of the fall term enrollment.

[2] (Col. 2 - Col. 4) x 86.7%

[3] No permanent facilities in 1967

[4] On a district basis. On a statewide basis the total is 86,914 (Col. 2 - Col. 4) x 86.7%

[a] Includes 552 at proposed Miramar College

As a preliminary step in the development of the first of the Council's reports on the need for additional centers, the Council in February 1964 requested review of the enrollment ranges (maximum and minimum) contained in the Master Plan. As the result of this action an Ad Hoc Technical Committee on Maximum and Minimum Enrollment Ranges[1] recommended that the maximum enrollment for Junior Colleges be set at 7,500 full-time students or the equivalent 10,275 day-graded students--to be exceeded in densely populated areas--and a minimum of 900 full-time or 1,233 day-graded students. The recommendation was used in development of the Council's 1964 additional centers study.

The Council, in its procedures and guidelines for this report directed that the following two alternatives with respect to maximum and minimum enrollments be used by the staff in developing proposals for Council consideration:

(1.) The figures used in the 1964 Report, and
(2.) A maximum limit 50% larger than the 1964 maximum (i.e., some 15,000 day-graded students)

Enrollments approaching 10,000 are not uncommon in Junior Colleges. In the fall of 1967, nine Junior Colleges had day-graded enrollments above 8,000, and 14 Junior Colleges have indicated[2] they plan to increase campus size well beyond 9,000 day-graded students--three anticipating enrollments of 9,000 to 11,000; five anticipating enrollments of 11,000 to 12,000; two, enrollments of 12,000 to 13,000; and four are planning a maximum of more than 13,000.

B. Consideration of Organization, Cost, and Educational Programs. The most significant organizational trend among the California Junior Colleges during recent years has been the shift toward multi-college districts. In 1964-65, there were five multi-college districts containing a total of 15 college campuses. By 1967-68, the number of such districts had increased to 11 with a total of 27 colleges, and two other districts had already authorized additional colleges. These 13 districts are currently planning to add 14 more colleges for a total of 43 by 1976. In addition, 11 more districts that now have single colleges plan to add another college during the same period. By 1976, according to such plans, there could be an estimated 24 multi-campus districts encompassing 65 individual college campuses.

During the next eight years alone Junior College districts which currently contain one or more colleges plan to establish approximately 25 additional colleges. The inevitable result of such plans will be a group of college campuses with an average size smaller than would otherwise be the case. This expansion in the number of campuses raises questions of the possible existence of economies-of-scale in the operation of Junior Colleges. Are the costs per student at a large college inherently less than those at a smaller college? Does the larger college offer a greater range and diversity of curriculum? The answers to questions should weigh prominently in districts' decisions concerning new college establishment.

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[1] Russell Barthell, CCHE, Chairman; Bill Priest, American River Junior College; Arthur Hall, California State Colleges and Frank Kidner, University of California.

[2] In response to a Council questionnaire sent to those districts whose projected 1977 enrollments would require college enrollments greater than 10,000 day-graded students requesting information as to plans for the 1977 enrollments.

In order to provide some evidence related to economies-of-scale in Junior College operations with respect to cost and educational program, the Council staff analyzed several sets of data available from the Council's 1965 Cost and Statistical Study and the Council's 1967 Study on Financing California's Junior Colleges. This analysis, included with this report as Appendix F-2, indicates that there are economies-of-scale in the operation of public Junior Colleges. Expenditures per student show a negative relationship to college size in all of the data examined. The data further indicate that the larger colleges offer a greater range of courses at lower unit costs than do the smaller colleges, and these courses are offered in a greater number of different subject fields.

The analysis of scale economies with respect to cost includes both operating and capital considerations. Capital costs are especially important if the major question is whether a district should operate with one or several college campuses.

The costs of master planning, land acquisition, site development, and basic utilities are added when a new campus is initiated and would not be incurred to any appreciable extent if the capacity of an existing campus was expanded. Such expenditures are significant. Land costs currently vary from about $10,000 per acre for rural sites to $100,000 per acre in urban areas. New Junior College campuses, with few exceptions, are being planned to encompass at least 100 acres. Thus, even a rural Junior College campus generally requires in excess of $1 million in land acquisition costs alone.

There are, in addition, certain physical facilities which would serve for a single campus of, say, 10,000 students, but which would be duplicated if the same group of students were split between two campuses. The size of the gymnasium, theatre and auditorium, student center, and the corporation yard is only partially a function of student enrollment. Such buildings normally exist in some form on each campus regardless of its enrollment.

The amount of space per student in the library facility also appears to decline as student enrollment increases. The size of the book collection and of the space required for its housing do not increase in direct proportion to an increase in students.

Data indicate that more faculty office area and supporting facilities are required in the "two, small campus" situation than in the "one, large campus" situation due to the larger student-faculty ratio in the latter situation.

There are certain, essentially indivisible, functions of general administration, library, student services, and plant maintenance that do not increase proportionately with enrollment increases. For example, a college normally employs only one president, one head librarian, one dean of students, etc., regardless of the size of the student enrollment. Space requirements of numerous other activities in these areas are related only partially to enrollment.

A district should consider both the range of program available to students and the economies-of-scale in deciding whether to expand existing college(s) or to establish new colleges. When the average college size resulting from several campuses is small--perhaps less than the statewide average (about 3,700 day-graded students in 1967), adding campuses can be unusually expensive.

The most prominent exception to this general rule would be in those districts where a number of students would be required to commute to (and from) the college over distances greater than those considered in this report to be reasonable, that is, 30 miles or 45 minutes (See Chapter III). Even in this case, however, it may be more appropriate to establish residence programs at existing campuses rather than locate additional, small-enrollment centers at various points throughout the district or to seek some other method of providing service.[1] There appears little advantage in having numerous campus centers located in one district, each offering a limited curriculum if students are not generally able to obtain the particular program in which they are interested at the center nearest their residence.

C. The Consideration of Campus Location. In this report the general interest of the state is considered to be paramount in determining of the need for additional centers of higher education--including Junior Colleges. As pointed out in Chapter I this implies the location of new college campuses in those areas where the largest number of students will be served. Further, since the establishment of a new Junior College is both a local and state matter, the establishment should desirably be based upon the optimum use of state and local resources in relation to the greatest need both geographically and functionally. The implementation of these principles with respect to the Junior Colleges, particularly with respect to the optimum location of new campuses, is exceedingly difficult because of the boundaries and size of district organizations through which the Junior Colleges are administered and financed.

Figure VI-1 shows the 68 districts into which the state has been divided--as of July 1968--for the purposes of financing and administering Junior College education, along with the area of the state which is not yet in a district. Figure VI-2 indicates the location of the 84 Junior Colleges within these districts. The districts in many instances cross county and other local governmental boundaries. In some urban areas three and even four districts converge. There are, for example, 15 districts which lie wholly or in large part within a radius of sixty miles from San Francisco, and twenty districts which lie wholly or in large part within a radius of sixty miles from Long Beach. The 15 districts in the San Francisco area had a combined enrollment of 77,803 day-graded students in 1967 served by 18 campuses with an average enrollment of 4,323. The 1977 enrollment projected for these districts is 140,225 and these same districts plan to add an additional 15 colleges for a total of 33. If these colleges were to be built, the average enrollment for the 33 colleges would be 4,248--slightly less than the per campus average of today.

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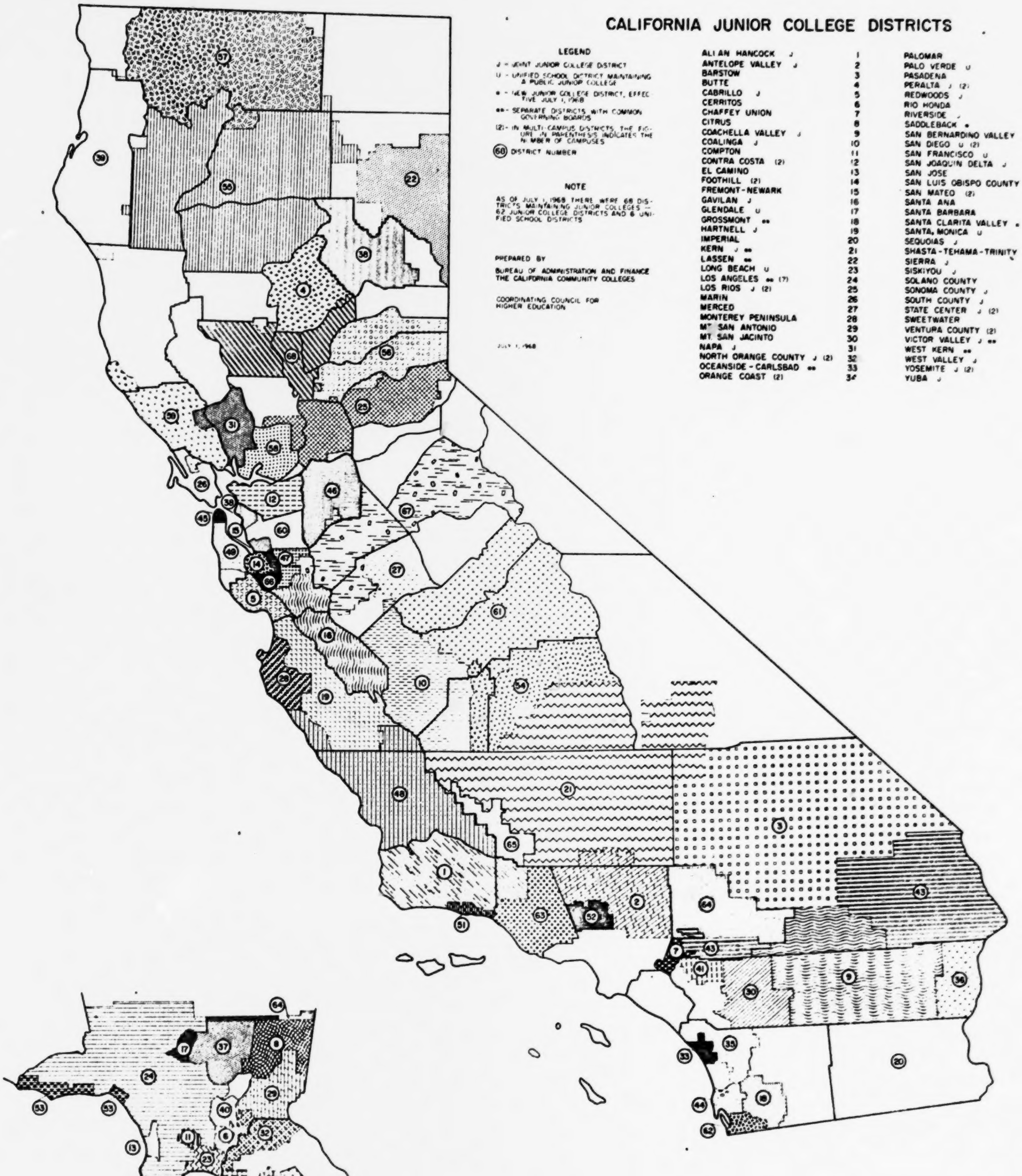
[1] Chapter III suggests some options which are potentially open to local boards other than providing new facilities.

FIGURE VI-1



CALIFORNIA JUNIOR COLLEGE DISTRICTS

LEGEND

J = JOINT JUNIOR COLLEGE DISTRICT

U - UNIFIED SCHOOL DISTRICT MAINTAINING A PUBLIC JUNIOR COLLEGE

• - NEW JUNIOR COLLEGE DISTRICT, EFFECTIVE JULY 1, 1968

•• - SEPARATE DISTRICTS WITH COMMON GOVERNING BOARDS

(2) - IN MULTI-CAMPUS DISTRICTS, THE FIGURE IN PARENTHESIS INDICATES THE NUMBER OF CAMPUSES

(68) DISTRICT NUMBER

NOTE

AS OF JULY 1, 1968 THERE WERE 68 DISTRICTS MAINTAINING JUNIOR COLLEGES — 62 JUNIOR COLLEGE DISTRICTS AND 6 UNIFIED SCHOOL DISTRICTS

PREPARED BY

BUREAU OF ADMINISTRATION AND FINANCE
THE CALIFORNIA COMMUNITY COLLEGES

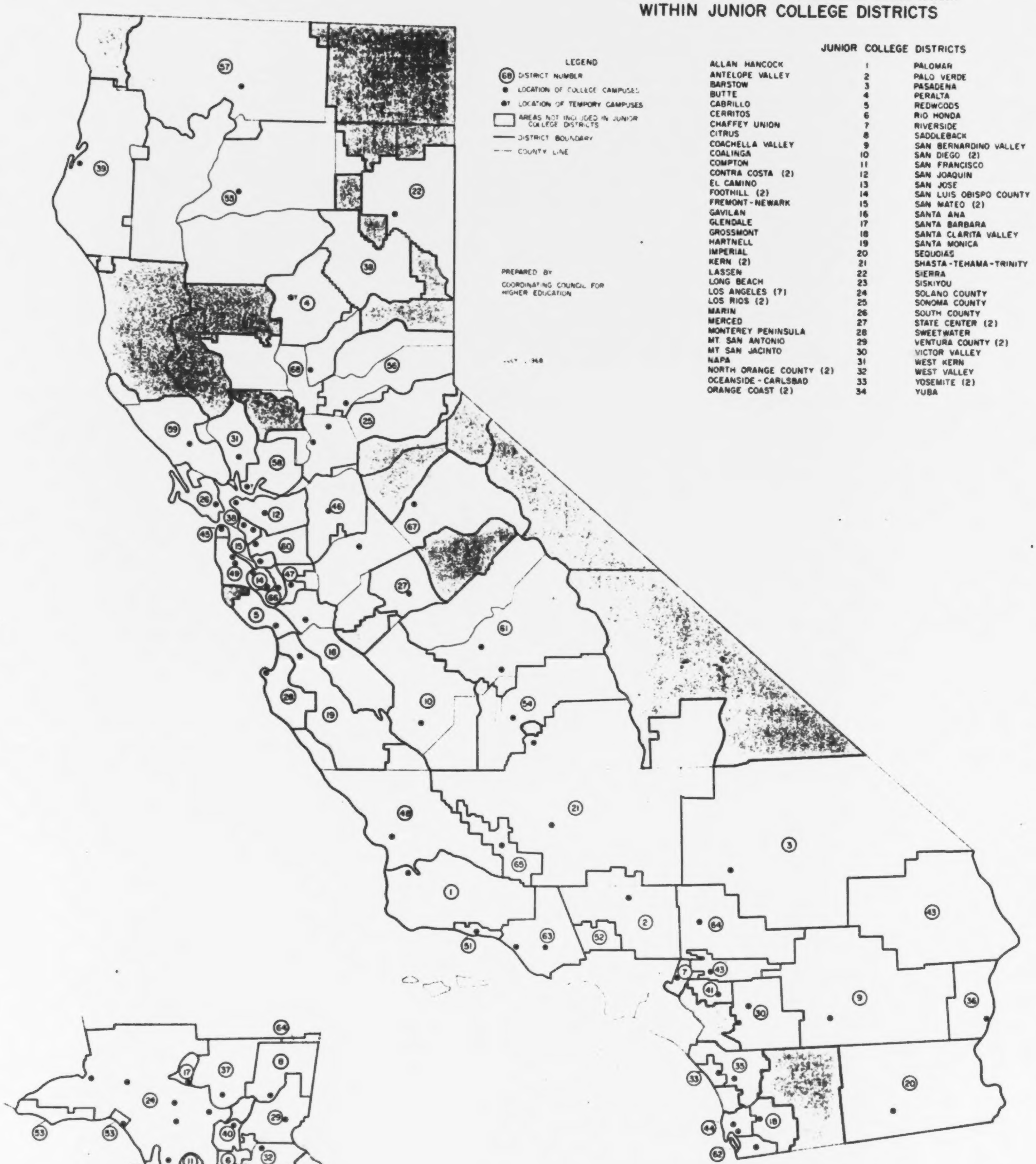
COORDINATING COUNCIL FOR
HIGHER EDUCATION

JULY 1, 1968

ALLAN HANCOCK J	1	PALOMAR	35
ANTELOPE VALLEY J	2	PALO VERDE U	36
BARSTOW	3	PASADENA	37
BUTTE	4	PERALTA J (2)	38
CABRILLO J	5	REDWOODS J	39
CERRITOS	6	RIO HONDA	40
CHAFFEY UNION	7	RIVERSIDE J	41
CITRUS	8	SADDLEBACK •	42
COACHELLA VALLEY J	9	SAN BERNARDINO VALLEY J	43
COALINGA J	10	SAN DIEGO U (2)	44
COMPTON	11	SAN FRANCISCO U	45
CONTRA COSTA (2)	12	SAN JOAQUIN DELTA J	46
EL CAMINO	13	SAN JOSE	47
FOOTHILL (2)	14	SAN LUIS OBISPO COUNTY J	48
FREMONT-NEWARK	15	SAN MATEO (2)	49
GAVILAN J	16	SANTA ANA	50
GLENDALE U	17	SANTA BARBARA	51
GROSSMONT ••	18	SANTA CLARITA VALLEY •	52
HARTNELL J	19	SANTA MONICA U	53
IMPERIAL	20	SEQUOIAS J	54
KERN J ••	21	SHASTA-TEHAMA-TRINITY J	55
LASSEN ••	22	SIERRA J	56
LONG BEACH U	23	SISKIYOU J	57
LOS ANGELES •• (7)	24	SOLANO COUNTY	58
LOS RIOS J (2)	25	SONOMA COUNTY J	59
MARIN	26	SOUTH COUNTY J	60
MERCED	27	STATE CENTER J (2)	61
MONTEREY PENINSULA	28	SWEETWATER	62
MT. SAN ANTONIO	29	VENTURA COUNTY (2)	63
MT. SAN JACINTO	30	VICTOR VALLEY J ••	64
NAPA J	31	WEST KERN ••	65
NORTH ORANGE COUNTY J (2)	32	WEST VALLEY J	66
OCEANSIDE-CARLSBAD ••	33	YOSEMITE J (2)	67
ORANGE COAST (2)	34	YUBA J	68

FIGURE VI-2

LOCATION OF JUNIOR COLLEGE CAMPUSES WITHIN JUNIOR COLLEGE DISTRICTS


LEGEND
68 DISTRICT NUMBER
● LOCATION OF COLLEGE CAMPUSES
●T LOCATION OF TEMPORY CAMPUSES
AREAS NOT INCLUDED IN JUNIOR COLLEGE DISTRICTS
DISTRICT BOUNDARY
COUNTY LINE
PREPARED BY
COORDINATING COUNCIL FOR HIGHER EDUCATION
JULY, 1968

JUNIOR COLLEGE DISTRICTS

ALLAN HANCOCK	1	PALOMAR	35
ANTELOPE VALLEY	2	PALO VERDE	36
BARSTOW	3	PASADENA	37
BUTTE	4	PERALTA	38
CABRILLO	5	REDWOODS	39
CERRITOS	6	RIO HONDA	40
CHAFFEY UNION	7	RIVERSIDE	41
CITRUS	8	SADDLEBACK	42
COACHELLA VALLEY	9	SAN BERNARDINO VALLEY	43
COALINGA	10	SAN DIEGO (2)	44
COMPTON	11	SAN FRANCISCO	45
CONTRA COSTA (2)	12	SAN JOAQUIN	46
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FOOTHILL (2)	14	SAN LUIS OBISPO COUNTY	48
FREMONT-NEWARK	15	SAN MATEO (2)	49
GAVILAN	16	SANTA ANA	50
GLENDALE	17	SANTA BARBARA	51
GROSSMONT	18	SANTA CLARITA VALLEY	52
HARTNELL	19	SANTA MONICA	53
IMPERIAL	20	SEQUOIAS	54
KERN (2)	21	SHASTA-TEHAMA-TRINITY	55
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LOS ANGELES (7)	24	SOLANO COUNTY	58
LOS RIOS (2)	25	SONOMA COUNTY	59
MARIN	26	SOUTH COUNTY	60
MERCED	27	STATE CENTER (2)	61
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NAPA	31	WEST KERN	65
NORTH ORANGE COUNTY (2)	32	WEST VALLEY	66
OCEANSIDE-CARLSBAD	33	YOSEMITE (2)	67
ORANGE COAST (2)	34	YUBA	68

The 20 districts in the Long Beach area had a combined enrollment of 140,306 day-graded students in 1967 and are served by 27 colleges for an average enrollment of 5,196. The 1977 enrollment projected for these districts is 261,957, and the districts plan to add an additional 9 colleges for a total of 36. If these colleges were to be built the average enrollment for these 36 colleges would be 7,276.

A large number of districts within a relatively small area, as in the San Francisco and Long Beach areas, can lead to the development of many small, relatively high cost campuses serving a limited area (the San Francisco Bay Area colleges would be substantially smaller on the average than those in the Los Angeles-Long Beach area). Regional considerations, rather than district considerations, in the determination of the need for, and the location of, new Junior College campuses could lead to fewer and larger campuses.

The establishment and location of a Junior College in one district with the idea of having substantial enrollments from adjoining districts is improbable under current law. By statute, a college must be financed and governed by the district in which it is located. Few districts are willing to pay for buildings large enough to house large numbers of students from other districts. These difficulties may be the chief reason the Council staff was unable to find evidence of inter-district cooperation in the establishment of new campuses.

Plans of Junior College Districts to Provide the Enrollment Capacity Required for the Enrollments Projected for 1977

The *Junior College Construction Act of 1967* required the governing board of each district operating a Junior College to plan ten years in advance for the capital outlay needs of the district. Specifically the Act states:

> On or before November 1, 1967, the governing board of each Junior College district shall prepare and submit to the State Department of Education a plan for capital construction for Junior College purposes of the district for the 10-year period commencing with that date. The plan shall be subject to continuing review by the governing board and each year shall be extended one year, and there shall be submitted to the Department of Education, on or before the first day of September in each succeeding year, a report outlining the required modifications or changes, if any, in the plan.[1]

Plans submitted by each district for the period November 1967 to November 1977 were made available to Council staff. (In some cases, modifications or changes in these plans--to be submitted on September 1, 1968--were also available in time for analysis consideration in this report.[2])

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[1] *Education Code*, Sec. 20065

[2] A sampling of 1968 plans indicate that they are much similar in context and scope to those submitted in 1967.

The 1967 Construction Act specifies that the 10-year plan of each district shall set out the estimated capital construction needs of the district with reference to elements including at least all of the following:

> (a) The plans of the district concerning its future academic programs, and the effect on estimated construction needs which may arise because of particular courses of instruction or subject matter areas to be emphasized.
>
> (b) The enrollment projections for each district formulated by the Department of Finance, expressed in terms of weekly student contact hours. The enrollment projections for each individual college within a district shall be made cooperatively by the Department of Finance and the junior college district.
>
> (c) The current enrollment capacity of the district expressed in terms of weekly student contact hours and based upon the space and utilization standards for junior college classrooms and laboratories adopted by the State Board of Education.
>
> (d) District office, library and supporting facility capacities as derived from the physical plant standards for office, library and supporting facilities adopted by the State Board of Education.
>
> (e) An annual inventory of all facilities of the district using standard definitions, forms, and instructions adopted by the State Board of Education.[1]

The plan submitted by each district was reviewed by the Council staff with respect to the above five elements and in light of the following additional elements thought by the Council staff to be essential for a well-developed construction plan:

1. A summary statement of the ten-year construction plan.
2. A map or sketch of the campus with information as to size, topography, landscaping, the location of buildings, parking, roads, utility lines, etc.
3. Map or sketch showing the college in relation to the community with information with respect to proximity to residential and employment areas, transportation available.

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[1] Education Code, sec. 20066.

4. Information with respect to the use of all buildings or other facilities, description of type or types of construction, flexibility of use, expansion possibilities, etc.

5. A priority listing of planned projects.

Most district plans did not include any of these elements. Many of the plans were merely a tabulation of enrollment projections, present capacity, and a listing by priority rating of proposed construction projects and of proposed campus site acquisitions. The time period covered by individual plans ranged from one-year to the full ten-year period.

None of the districts submitted an academic plan, none submitted a map or sketch of the college with respect to the community, none submitted information on transportation available or flexibility of use or expansion possibilities. Only one district included a summary statement of the district's ten-year plan and only two districts included a sketch or map of the district.

The seventeen districts listed below were shown in Table VI-3 to have enrollment capacity already in existence, under construction or funded,[1] greater than the enrollments projected for the district for 1977. They are:

Allan Hancock
Antelope Valley
Cabrillo
Citrus
Coalinga
El Camino
Glendale
Grossmont
Monterey Peninsula
Mt. San Antonio
Mt. San Jacinto
Oceanside-Carlsbad
Palo Verde
San Luis Obispo
South County
Victor Valley
West Kern

One of the above districts, South County, even though it will have excess capacity in 1977, plans to have two additional campuses in operation by that date. (Staff comment on the capital outlay plans of the South County district appears in a later section of the report concerned with districts which plan to add new campuses.)

The remaining 51 districts in the state will need additional enrollment capacity by 1977 and the 10-year capital construction plans for these districts indicate about one-half plan to build new colleges and the rest plan additional facilities on existing campuses.

Districts Planning to Provide Capacity Through the Expansion of Existing Facilities.

Twenty-four of the districts needing additional capacity for the enrollments projected for 1977 plan to provide this capacity through the expansion of existing facilities. These districts are listed below and all, except one, Orange Coast, are single-campus districts. Four of these single-campus districts will have enrollments of less than 2,500 day-graded students in 1977, nine will have enrollments in the 2,500-5,000 range, four in the 5,000-7,500 range, two in the 7,500-10,000 range, and four will have campuses above 10,000--Cerritos at 11,677 day graded students, Long Beach at 14,768, Pasadena at 10,798 and San Francisco at 13,647. The multi-campus district, Orange Coast, will have two colleges with enrollments of 11,500 and 11,804.

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[1] Funded capacity is that to be derived from capital projects for which funds have been budgeted and are available.

Barstow
Cerritos
College of the Sequoias
Compton
Gavilan
Hartnell
Imperial
Lassen
Long Beach
Merced
Napa
Orange Coast
Palomar
Pasadena
Redwoods
Rio Hondo
San Francisco
Santa Ana
Santa Barbara
Santa Monica
Sierra
Siskiyou
Sweetwater
Yuba

Table VI-4 indicates that four of these districts, College of the Sequoias, Compton, Napa and Pasadena could have sufficient enrollment capacity for the enrollments of 1977 if they instituted year-round operation in which the summer term enrollment equalled 40% of the fall term enrollment. The remaining districts could delay the addition of on-campus facilities through the institution of year-round operation.

Districts Planning to Provide Capacity Through the Addition of New Campuses

Twenty-seven districts, listed below, plan to provide for additional capacity by 1977 through the addition of one or more new colleges. Five of these districts--Butte, Fremont-Newark, Saddleback, Santa Clarita, and West Valley--are newly formed and plan the establishment of their initial permanent campuses. San Joaquin Delta, Peralta and Solano will be replacing leased facilities.

Butte
Chaffey
Coachella Valley
Contra Costa
Foothill
Fremont-Newark
Kern
Los Angeles
Los Rios
Marin
North Orange
Peralta
Riverside
Saddleback
San Bernardino Valley
San Diego
San Jose
San Mateo
Santa Clarita Valley
Shasta
Sonoma
Solano
State Center
Ventura
West Valley
Yosemite
San Joaquin Delta

The plans of these districts to accommodate enrollments through 1977 as submitted pursuant to the Junior College Construction Act of 1967 and as augmented by information secured directly from district administrations,[1] are analyzed in the following pages within the framework of the several options to provide capacity for expanding enrollments considered above.

For purposes of analysis, the districts have been grouped on a regional basis. District proposals are first considered individually and are then related to those of the other districts within the region as appropriate. Certain areas, of course, lend themselves to a regional approach better than do others. The Bay Area and the Los Angeles metropolitan area are perhaps the most easily defined, in other instances a district itself is large enough to be tantamount to a region.

THE SAN FRANCISCO BAY DISTRICTS

The thirteen districts surrounding San Francisco and San Pablo Bays are shown in Figure VI-3. Two of these districts, Napa and San Francisco, plan to accommodate projected enrollments through the addition of facilities to existing campuses. The remaining eleven districts, listed below, are planning new colleges to accommodate their projected enrollments.

Marin
Sonoma
Contra Costa
Fremont-Newark
Peralta
South County
San Jose
West Valley
Foothill
San Mateo
Solano

The Marin Junior College District. The Marin district enrolled 3,744 day-graded students in the fall 1967 and has a projected enrollment of 6,732 for 1977. To accommodate its present enrollment, the district has the College of Marin at Kentfield in the southern part of the district, with an existing enrollment capacity of 4,618 day-graded students. An additional enrollment capacity of 1,670 is funded, giving a total of 6,288. The institution of year-round operation if appropriate, and if summer term enrollment equalled 40% of fall term enrollment, is estimated to increase the enrollment capacity to 7,124--well above the enrollment projected for the district in 1977. Additional on-campus facilities could be planned as well.

However, the Marin district plans a second campus to be established prior to 1977 to be located, as shown in Figure VI-3, approximately twelve miles north of the present campus. The potential students for this second campus would be within a reasonable commuting distance from College of Marin. The College of Marin could, with options such as year-

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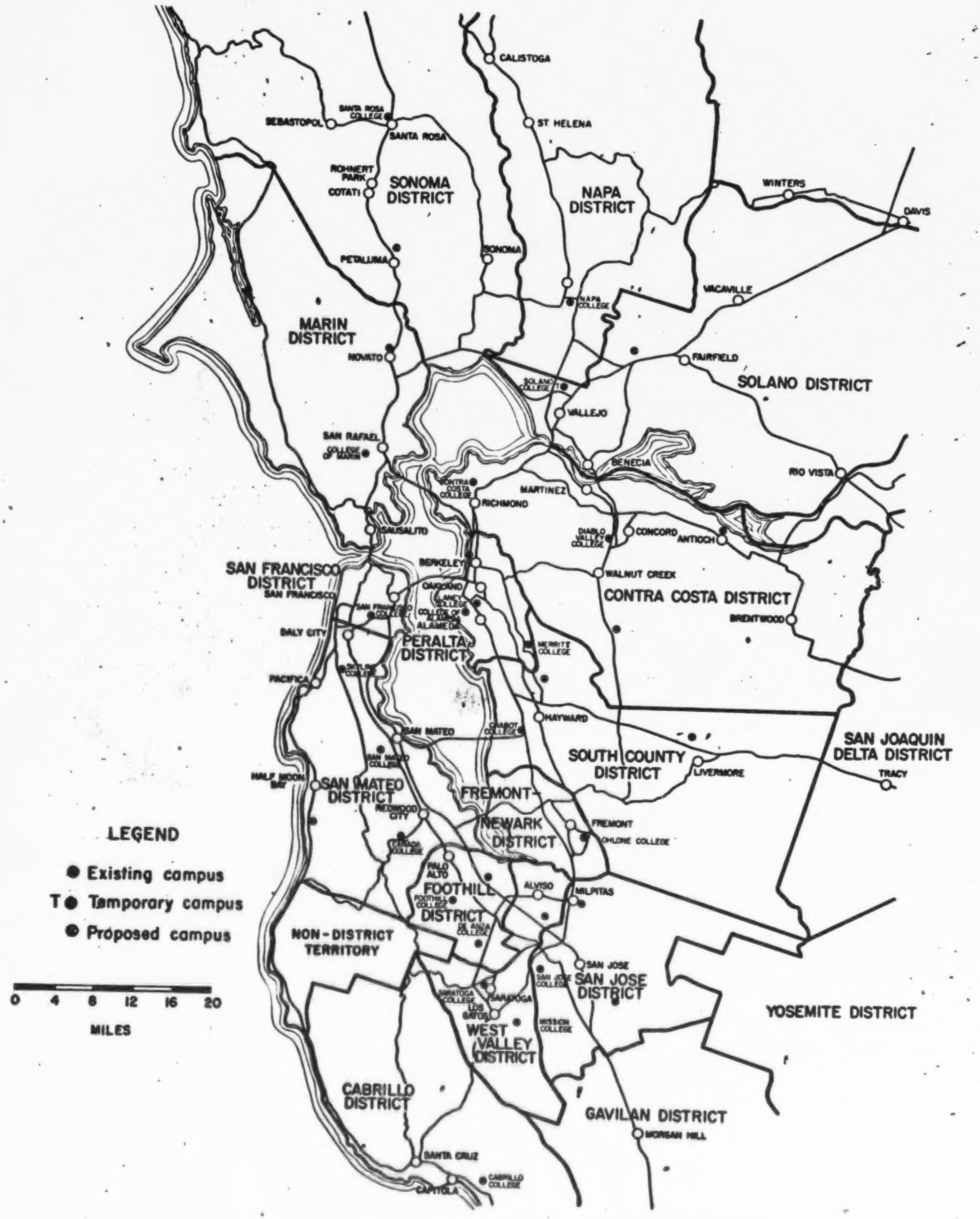
[1] Each district, of course, may have changed its plan recently. The material presented is based on the available information at the time of writing.


CALISTOGA
SEBASTOPOL
SANTA ROSA COLLEGE
SANTA ROSA
ST HELENA
ROHNERT PARK
COTATI
SONOMA DISTRICT
NAPA DISTRICT
WINTERS
DAVIS
PETALUMA
SONOMA
NAPA COLLEGE
VACAVILLE
MARIN DISTRICT
NOVATO
FAIRFIELD
SOLANO COLLEGE
SOLANO DISTRICT
VALLEJO
SAN RAFAEL
COLLEGE OF MARIN
BENECIA
RIO VISTA
CONTRA COSTA COLLEGE
MARTINEZ
RICHMOND
SAUSALITO
DIABLO VALLEY COLLEGE
CONCORD
ANTIOCH
BERKELEY
SAN FRANCISCO DISTRICT
SAN FRANCISCO
WALNUT CREEK
OAKLAND
LANEY COLLEGE
SAN FRANCISCO COLLEGE
COLLEGE OF ALAMEDA
ALAMEDA
CONTRA COSTA DISTRICT
BRENTWOOD
DALY CITY
PERALTA DISTRICT
MERRITT COLLEGE
SKYLINE COLLEGE
PACIFICA
HAYWARD
CHABOT COLLEGE
SAN MATEO
SAN JOAQUIN DELTA DISTRICT
SAN MATEO COLLEGE
SOUTH COUNTY DISTRICT
LIVERMORE
TRACY
HALF MOON BAY
SAN MATEO DISTRICT
FREMONT-
REDWOOD CITY
NEWARK DISTRICT
FREMONT
OHLONE COLLEGE
CAÑADA COLLEGE
PALO ALTO
FOOTHILL
ALVISO
MILPITAS
FOOTHILL COLLEGE
DISTRICT
DE ANZA COLLEGE
NON-DISTRICT TERRITORY
SAN JOSE
SAN JOSE COLLEGE
SAN JOSE DISTRICT
SARATOGA COLLEGE
SARATOGA
LOS GATOS
YOSEMITE DISTRICT
WEST VALLEY DISTRICT
MISSION COLLEGE
CABRILLO DISTRICT
GAVILAN DISTRICT
MORGAN HILL
SANTA CRUZ
CABRILLO COLLEGE
CAPITOLA
LEGEND
● Existing campus
T● Temporary campus
◉ Proposed campus
0 4 8 12 16 20
MILES

SAN FRANCISCO AND
SAN PABLO BAY
JUNIOR COLLEGE DISTRICTS

round operation or the addition of facilities, accommodate the enrollments projected through 1977. On the basis of available data, a second campus does not appear needed by 1977.

Sonoma Junior College District. The Sonoma County District, as shown in Figure VI-3, adjoins the Marin Junior College District on the north, and is served by one college, Santa Rosa Junior College, located approximately in the center of the district. The district had an enrollment of 3,155 day-graded students in 1967 and has a projected enrollment of 5,664 for 1977. The current capacity of Santa Rosa Junior College is 4,972 day-graded students and an additional funded capacity of 125 will be available prior to 1977. Facilities to accommodate 567 more day-graded students will have to be available by 1977. However, if year-round operations were instituted with only a 40% balance between summer and fall term enrollments, Santa Rosa Junior College might be able to accommodate the entire enrollment projected for 1977 without adding facilities.

The district plans to begin development of a second college by 1973 on a site approximately 12 miles south of the Santa Rosa campus, immediately north of the town of Petaluma. Figure VI-3 shows that the proposed campus for the Sonoma County District and the proposed campus for the Marin District would be approximately 10 miles apart.

Since the potential students for this second campus are within relatively easy commuting range of the Santa Rosa campus, and since the Santa Rosa campus either with year-round operations or with a small increase in facilities, could accommodate the enrollment now projected for 1977, a second campus would seem to be unnecessary, at least through 1977.

Contra Costa Junior College District. The Contra Costa District enrolled 9,160 day-graded students in fall 1967 and will enroll 15,770 day-graded students in 1977. The district is served by two Junior Colleges, Contra Costa Junior College and Diablo Valley Junior College. The combined capacity of these two colleges is 9,273 students, approximately equal to the 1967 district enrollment.

To accommodate projected enrollments, the district plans two additional campuses: one, located in the eastern part of the district near Antioch, to be in operation by 1972; the second, located in the southern part of the district near Danville, to be in operation by 1976. The college in the vicinity of Antioch would be some 15 miles from the Diablo Valley campus. The college in the vicinity of Danville, would be approximately 11 miles from the Diablo Valley campus. The enrollment and annual growth predicted for the two new colleges is small. The Antioch campus is to open in 1972 with an enrollment of 2,000 day-graded students is to increase to only 2,700 by 1977--a growth of 140 per year. The Danville campus would open with an enrollment of 2,200 in 1976 and would enroll 2,316 in 1977. The projected enrollments for all four colleges are shown in Table VI-5. The table shows the annual growth of the Contra Costa campus, a metropolitan campus master planned for 10,000, to be 100 students per year after the new colleges are built. The two new

TABLE VI-5

CONTRA COSTA JUNIOR COLLEGE DISTRICT
Day-Graded Student Projections
1967-1977

	Campus				
Fall Term	Diablo Valley	Contra Costa	Proposed East College	Proposed South College	DISTRICT TOTAL
1967	5,888	3,272	-	-	9,160
1968	6,570	3,308	-	-	9,878
1969	7,150	3,389	-	-	10,539
1970	7,939	3,449	-	-	11,388
1971	8,680	3,460	-	-	12,140
1972	7,772	3,560	2,000	-	13,332
1973	8,368	3,660	2,200	-	14,228
1974	8,719	3,760	2,400	-	14,879
1975	8,876	3,860	2,500	-	15,236
1976	6,694	3,960	2,600	2,200	15,454
1977	6,694	4,060	2,700	2,316	15,770

colleges also accommodate enrollment that could be housed in the Diablo Valley campus where, the enrollment will drop from a high of 8,876 in 1975, to 6,694 in 1977.

The district indicates that the Contra Costa College campus is master planned for 10,000 students, and the Diablo Valley campus is able to accommodate almost 9,000 students in 1975. Since the students projected for the new campuses are within commuting range of the two existing campuses, with planned capacity sufficient to house them there appears to be no need for new colleges prior to 1977.

Solano County Junior College District. The Solano district had an enrollment of 2,796 day-graded students in the fall term 1967, housed in leased facilities near Vallejo. The district has an enrollment of 4,624 projected for 1977 and plans to open a new college prior to 1977 to replace the leased facilities. The college will be located approximately six miles west of Fairfield.

Peralta Junior College District. The Peralta district consists of the area shown on Figure VI-3 and most of Plumas County, some 200 miles to the northeast. The need for additional facilities in the Peralta district will be considered, therefore, separately for "Peralta (Alameda)" and "Peralta (Plumas)."

Peralta (Alameda) enrolled 9,156 day-graded students in fall 1967 and will enroll 14,453 in 1977. At the present time this area is served by two leased facilities--Laney College with a capacity of 4,164 day-graded students, and Merritt College with a capacity of 5,733. The district plans to replace the Laney campus with a new facility to open in the fall of 1970, with an enrollment of 5,000 day-graded students and 6,844 students projected for 1977. The district also plans to open in 1970 an additional new facility--College of Alameda--with a projected enrollment of 2,635 day-graded students in 1977, and a maximum projected enrollment of approximately 3,000. This second facility, College of Alameda, will be only two miles from the new Laney College--a college in a metropolitan area that could be master planned for a maximum enrollment of not less than 10,000 day-graded students. The district also plans to open a third new college in the fall of 1971 to replace the leased Merritt facilities and to retain the name, Merritt College. The new Merritt College will be located somewhat less than ten miles from the Alameda and Laney Colleges. Merritt will have a projected enrollment of only 3,546 in 1977, almost six years after it opens. A fourth college--Berkeley--to be located approximately five miles north of the Laney and Alameda campuses, is planned for operation after 1977.[1] The enrollments projected for these colleges and the Feather River College planned for Peralta (Plumas) are shown in Table VI-6. Peralta (Alameda) would, therefore, under present plans have four campuses in operation in 1977 to accommodate a district enrollment of 14,453, with the greatest distance between any two campuses somewhat less than 15 miles.

Based on student demand and commuting distance it is indicated that the 1977 enrollments projected for Peralta-Alameda could be accommodated in two campuses and that the two additional colleges should not be needed by 1977.

The district plans to serve the Peralta (Plumas) area with a facility to be known as Feather River College. The opening enrollment projected for this college is 112 day-graded students, with 1977 enrollment projected to be 497. This campus is to serve an isolated area. The district plans to bring students from the Peralta (Alameda) area to the Feather River campus and vice versa. This plan presents an interesting innovation in serving isolated areas. However, the data provided by the Council study on economies-of-scale presented earlier and included in Appendix F-2, suggests that such a college with a small enrollment can operate only a very limited program at a high per-student cost. It would seem, therefore, that alternative means of accommodating the enrollment in this isolated area might be considered.

---

[1] Information recently supplied the Council staff indicates plans for this campus may be abandoned.

TABLE VI-6

PERALTA JUNIOR COLLEGE DISTRICT
Day-Graded Student Projections
1967-1977

	Campus					
Fall Term	Laney	Merritt	College of Alameda	Feather River	Berkeley	DISTRICT TOTAL
1967	3,774	5,382	-	-	-	9,156
1968	4,417	4,881	124	112	-	9,534
1969	4,891	4,880	196	168	-	10,135
1970	4,985	4,880	1,500	210	-	11,575
1971	6,786	3,000	2,200	250	-	12,236
1972	6,444	3,000	2,200	310	994	12,948
1973	6,844	3,000	2,200	373	994	13,451
1974	6,844	3,130	2,294	435	1,087	13,790
1975	6,844	3,294	2,418	497	1,211	14,264
1976	6,844	3,421	2,511	497	1,304	14,577
1977	6,844	3,546	2,635	497	1,429	14,951

South County Junior College District. South County district enrolled 5,430 day-graded students in fall 1967, and will enroll 9,106 in 1977. The district is served by one Junior College, Chabot, located at the west end of the district. Chabot, with an enrollment capacity of 11,048, has sufficient capacity for the district's total projected 1977 enrollment. The district plans, however, to open two more colleges prior to 1977, each with an initial capacity of 2,500 full-time-equivalent or approximately 3,425 day-graded students. One campus is planned to be near Livermore in the north central portion of the district, approximately 20 miles from the Chabot campus. The second campus will be at Lake Chabot in the extreme northwest portion of the district, approximately 8 miles from the present Chabot campus--and approximately four miles from the Merritt campus proposed for the adjoining Peralta (Alameda) district.

Since the current enrollment capacity of the Chabot campus is sufficient for the district's anticipated 1977 enrollments, and since the commuting time and distance to Chabot is within the limits established for this study, additional colleges for the district would not appear required prior to 1977 on the basis of data at hand.

Fremont-Newark District. The Fremont-Newark district enrolled 780 day-graded students in the fall of 1967, housed in leased facilities, and will have an enrollment of 4,979 in 1977. The district plans to construct its initial campus, Ohlone College, for occupancy by fall 1972, with an enrollment capacity of 4,398 day-graded students. The site for the college is located near the southern end of the district at its eastern boundary--a location that will require maximum commuting time and distance for a majority of the district's potential enrollment.

San Jose Junior College District. The San Jose district enrolled 4,626 day-graded students in the fall term 1967, and will have an enrollment of 9,054 in 1977. The district is served by one college, San Jose City College, located at the western edge of the metropolitan area of the district with an enrollment capacity of 5,000 day-graded students. The college is within approximately 12 miles of all populous sections of the district.

The district plans to open a second campus in 1974, in the southeastern portion of the district within 10 miles of San Jose City College. A third campus is planned for completion prior to 1977 to be located in the extreme northwestern portion of the district some 8 miles from the San Jose campus, within 5 miles of a proposed campus in the adjoining West Valley district, and within 8 miles of the Ohlone College of the adjoining Fremont-Newark district. In 1977 the San Jose district would thus have three campuses to accommodate an enrollment of 9,000 day-graded students.

In view of the central location of the existing campus, it appears that no new colleges should be needed as the cost of expanding the facilities of the San Jose campus is probably less than the cost of two new colleges. Part of the San Jose enrollment could be housed in colleges planned in adjoining districts if such arrangements can be facilitated by statute.

West Valley Junior College District. The West Valley district, as shown in Figure VI-3, is "squeezed" between the San Jose district on the east and the Foothill district on the west. West Valley enrolled 3,656 day-graded students in fall 1967 housed in leased facilities. The 1977 enrollment projected for the district is 8,481. The district plans three new colleges to accommodate this enrollment. The first, Saratoga College, is to be located near the town of Saratoga replacing presently leased facilities and is scheduled to open in fall 1971 with capacity for 5,625 day-graded students and an ultimate capacity of approximately 6,800 day-graded students. The second campus, Mission College, to be located in the northern part of the district near the town of Agnew approximately 12 miles from the Saratoga campus, is planned for opening in the fall of 1974, with an eventual enrollment capacity of 6,800 day-graded students. The third campus is scheduled for the southern section of the district approximately six miles from the Saratoga campus and is planned to open prior to 1977 with an eventual capacity of 6,800 day-graded students.

The West Valley district plans to have its three colleges in operation by 1977 to serve a currently projected enrollment of 8,481 day-graded students. The greatest distance between any two of the colleges being approximately 12 miles. The combined capacity planned for these colleges by the district would be 20,400 day-graded students, more than double the 9,054 enrollment projected for the district in 1977.

It should be noted in Figure VI-3 that the Saratoga campus is approximately five miles from Foothill Junior College district's De Anza campus and somewhat less than ten miles from the San Jose district's City college. Further, the Mission campus would be less than five miles from the San Jose district's proposed northern campus.

Since any one of the three proposed campuses would require a commuting distance of less than fifteen miles for the student residing in the most remote part of the district, and since any one of the colleges could at this stage be planned to accommodate an enrollment in excess of 10,000 day-graded students--well beyond the total district's 1977 projected enrollment--two new colleges do not appear called for.

Foothill Junior College District. The Foothill district, as shown in Figure VI-3, is roughly a square with sides of approximately twelve miles. The district enrolled 8,223 students in fall 1967, with 15,198 projected for 1977. To accommodate its current and projected enrollment the district has a capacity of 12,322 day-graded students almost equally divided between its two campuses, Foothill College and the new De Anza College. A circle drawn with a radius of 8 miles and with the Foothill campus as a center would cover the entire district except for a small area in the southeast corner served by the De Anza campus.

The district plans to construct a third campus to begin operation by fall 1974, to be located less than five miles from the Foothill campus. Since both of the existing campuses in the district are within easy commuting range of the entire district and if each were expanded to reach an enrollment capacity of 10,000 day-graded students, a third campus would not be needed. In addition, careful consideration could be given to the institution of year-round operation and to the possible accommodation of students residing in the Foothill district in existing or planned campuses in adjacent districts should statutory provision encourage this.

San Mateo Junior College District. The San Mateo district enrolled 8,730 day-graded students in fall 1967 and projects an enrollment of 16,007 in 1977. District policy, calling for a campus within eight miles of any resident of the district, has resulted in the establishment of three new colleges within the district and plans for the opening of a fourth sometime after 1977. The first college, San Mateo opened in fall 1962, the second in 1968, and the third is to take students in 1969. The three colleges are spaced about ten miles apart along the center of the district and are master planned for an enrollment of 8,000 day-graded students each. The fourth campus is to be located at the western edge of the district. The projected enrollments to 1977 for each of the three existing campuses is shown in Table VI-7.

According to the criteria on size and commuting distance established for this study, the San Mateo district would not have required three campuses to accommodate the enrollments projected for 1977. Additional campuses may not be indicated after 1977 if a State College campus is opened in the San Mateo district as is presently proposed.

The existing enrollment capacity of the district and that under construction and funded, will provide a capacity of 17,330 by 1977--well over the projection of 16,000. Further construction on the three campuses does not appear needed until after 1977.

A Consideration of the San Francisco and San Pablo Bay Districts on a Regional Basis. The analysis of individual district plans in the San Francisco and San Pablo Bay area does not show the need for an additional campus to serve the projected enrollments for 1977--beyond the initial campuses planned by the Fremont-Newark and West Valley districts, and the campus in the San Mateo district opening in fall 1969.

TABLE VI-7

SAN MATEO JUNIOR COLLEGE DISTRICT DAY-GRADED
STUDENT PROJECTIONS
1967-1977

	Student Projections			
Year	C.S.M.	Canada	Skyline	Total
1967	8,730	---	---	8,730
1968	8,280	1,998	---	10,278
1969	7,292	2,326	2,012	11,630
1970	7,445	3,027	2,410	12,882
1971	7,552	3,123	2,788	13,463
1972	7,582	3,270	3,061	13,913
1973	7,510	3,399	3,314	14,223
1974	7,520	3,541	3,570	14,631
1975	7,530	3,742	3,879	15,151
1976	7,543	3,888	4,121	15,552
1977	7,555	4,066	4,386	16,007

However, an analysis of the need for additional Junior Colleges in the entire region, wherein district boundaries are ignored, yields somewhat different results. For example, neither the Marin district nor the Sonoma district alone could, on the basis of projected enrollment or commuting distances used in this study, support the need for a new campus prior to 1977. When considered together, it becomes evident that sometime after 1977 a single new campus may be needed in a location somewhere between the two existing campuses of the two districts. New procedures are required to make it possible for the two districts to jointly build and operate such a single campus.

Data used in this study indicate that in the area covered by the four districts on the east side of San Francisco Bay--Contra Costa, Peralta, South County, and Fremont-Newark--the enrollment of 44,859 projected for 1977 does not suggest the need for the 12 colleges these districts have planned for the area. If these 12 colleges were established their average day-graded enrollment would be only 3,738, and in some cases they would be located only two to five miles apart. Without consideration of district boundaries the location of any new campuses within this area would differ from present plans. As pointed out previously, South County and Peralta are planning campuses near each other--leading to a conclusion that one campus could suffice. A South County campus at Livermore could perhaps be better justified if it served the potential enrollment clustered around the Tracy area in the San Joaquin Delta district. If a part of the enrollment projected for the Fremont-Newark district could make use of the excess enrollment capacity existing at Chabot, a single college in the Sunol area of South County district might serve the remaining enrollment in Fremont-Newark and also South County.

In the area formed by the three districts at the south end of the Bay--Foothill, West Valley, and San Jose, nine campuses do not seem justified in 1977 to serve a projected enrollment of 32,733, for an average of only 3,637 per campus. A circle with a radius of ten miles and with a center at the San Jose City College campus could cover all nine colleges. The four campuses now in existence (including the Saratoga campus of West Valley) could accommodate the three districts' 1977 projected enrollment--and if not, a single additional campus could house enrollment projected for the three northern campuses planned by Foothill, West Valley, and San Jose.

THE CENTRAL VALLEY DISTRICTS

Seven districts planning new colleges in the Central Valley of California are listed below. These districts, shown in Figure VI-4, are characterized by large geographical area and by concentrations of population in relatively few parts of the district, leaving large sparsely populated areas isolated from Junior College facilities. Generally, because of their large areas, the need for and location of facilities in one district is not related to the need for and location of facilities in other districts. Each district, however, faces the problem of providing educational opportunity for potential students who reside in areas remote from the district's educational centers by distance, travel time, or climatic factors.[1] The plans of each of these districts, as listed below, to provide facilities for projected enrollments are discussed in the following:

Shasta
Butte
Los Rios
San Joaquin Delta
Yosemite
State Center
Kern

---

[1] See Chapter III for some of the options open to districts and the state to provide for individuals beyond commuting range to a Junior College.

FIGURE VI-4

CALIFORNIA JUNIOR COLLEGE DISTRICTS

LEGEND

J - JOINT JUNIOR COLLEGE DISTRICT

U - UNIFIED SCHOOL DISTRICT MAINTAINING A PUBLIC JUNIOR COLLEGE

• - NEW JUNIOR COLLEGE DISTRICT, EFFECTIVE JULY 1, 1968

•• - SEPARATE DISTRICTS WITH COMMON GOVERNING BOARDS

(2) - IN MULTI-CAMPUS DISTRICTS, THE FIGURE IN PARENTHESIS INDICATES THE NUMBER OF CAMPUSES

(68) DISTRICT NUMBER

NOTE

AS OF JULY 1, 1968 THERE WERE 68 DISTRICTS MAINTAINING JUNIOR COLLEGES — 62 JUNIOR COLLEGE DISTRICTS AND 6 UNIFIED SCHOOL DISTRICTS

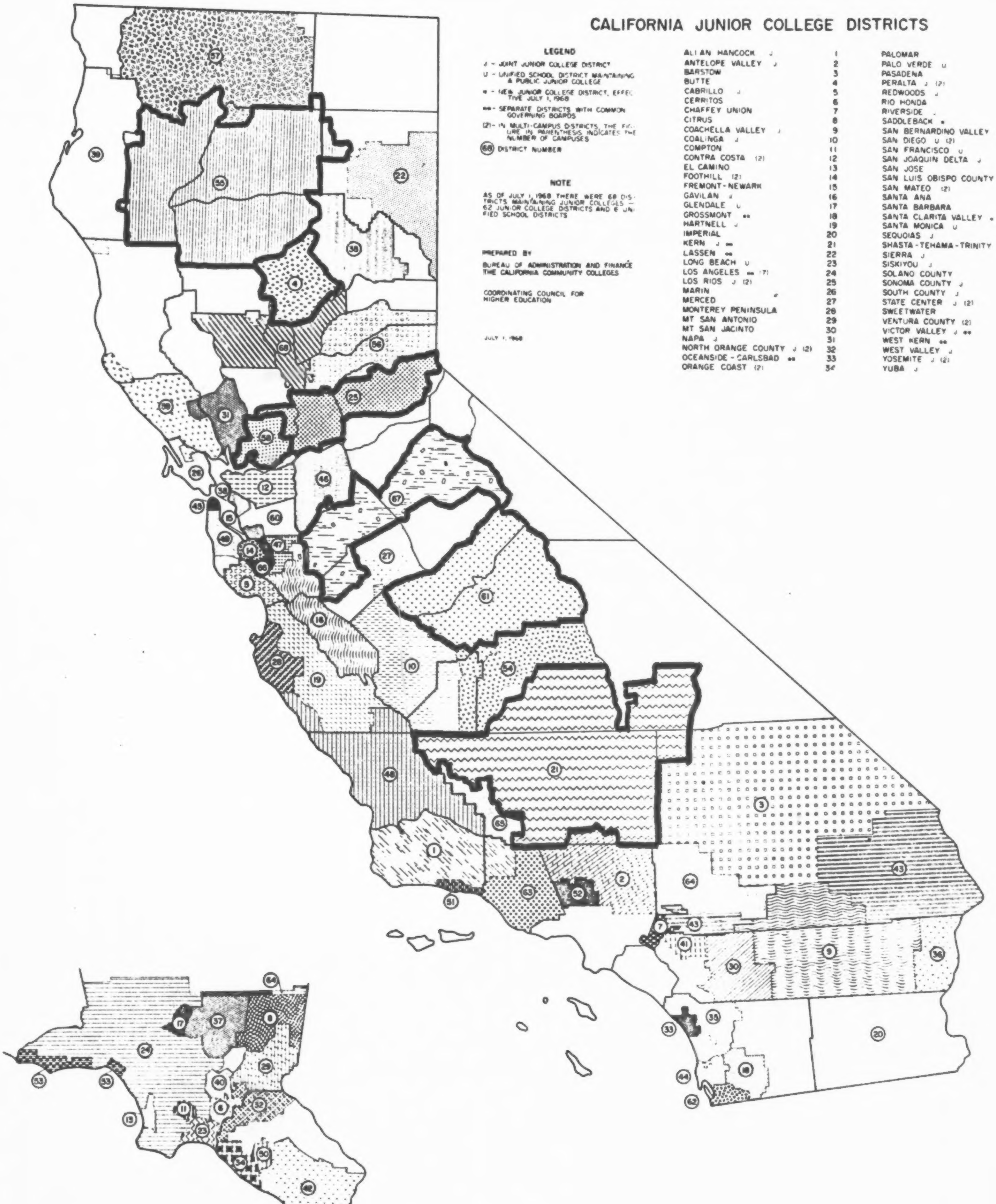
PREPARED BY

BUREAU OF ADMINISTRATION AND FINANCE
THE CALIFORNIA COMMUNITY COLLEGES

COORDINATING COUNCIL FOR
HIGHER EDUCATION

JULY 1, 1968

ALLAN HANCOCK J	1
ANTELOPE VALLEY J	2
BARSTOW	3
BUTTE	4
CABRILLO J	5
CERRITOS	6
CHAFFEY UNION	7
CITRUS	8
COACHELLA VALLEY J	9
COALINGA J	10
COMPTON	11
CONTRA COSTA (2)	12
EL CAMINO	13
FOOTHILL (2)	14
FREMONT-NEWARK	15
GAVILAN J	16
GLENDALE U	17
GROSSMONT ••	18
HARTNELL J	19
IMPERIAL	20
KERN J ••	21
LASSEN ••	22
LONG BEACH U	23
LOS ANGELES •• (7)	24
LOS RIOS J (2)	25
MARIN	26
MERCED	27
MONTEREY PENINSULA	28
MT SAN ANTONIO	29
MT SAN JACINTO	30
NAPA J	31
NORTH ORANGE COUNTY J (2)	32
OCEANSIDE-CARLSBAD ••	33
ORANGE COAST (2)	34
PALOMAR	35
PALO VERDE U	36
PASADENA	37
PERALTA J (2)	38
REDWOODS J	39
RIO HONDA	40
RIVERSIDE J	41
SADDLEBACK •	42
SAN BERNARDINO VALLEY J	43
SAN DIEGO U (2)	44
SAN FRANCISCO U	45
SAN JOAQUIN DELTA J	46
SAN JOSE	47
SAN LUIS OBISPO COUNTY J	48
SAN MATEO (2)	49
SANTA ANA	50
SANTA BARBARA	51
SANTA CLARITA VALLEY •	52
SANTA MONICA U	53
SEQUOIAS J	54
SHASTA-TEHAMA-TRINITY J	55
SIERRA J	56
SISKIYOU J	57
SOLANO COUNTY	58
SONOMA COUNTY J	59
SOUTH COUNTY J	60
STATE CENTER J (2)	61
SWEETWATER	62
VENTURA COUNTY (2)	63
VICTOR VALLEY J ••	64
WEST KERN ••	65
WEST VALLEY J	66
YOSEMITE J (2)	67
YUBA J	68



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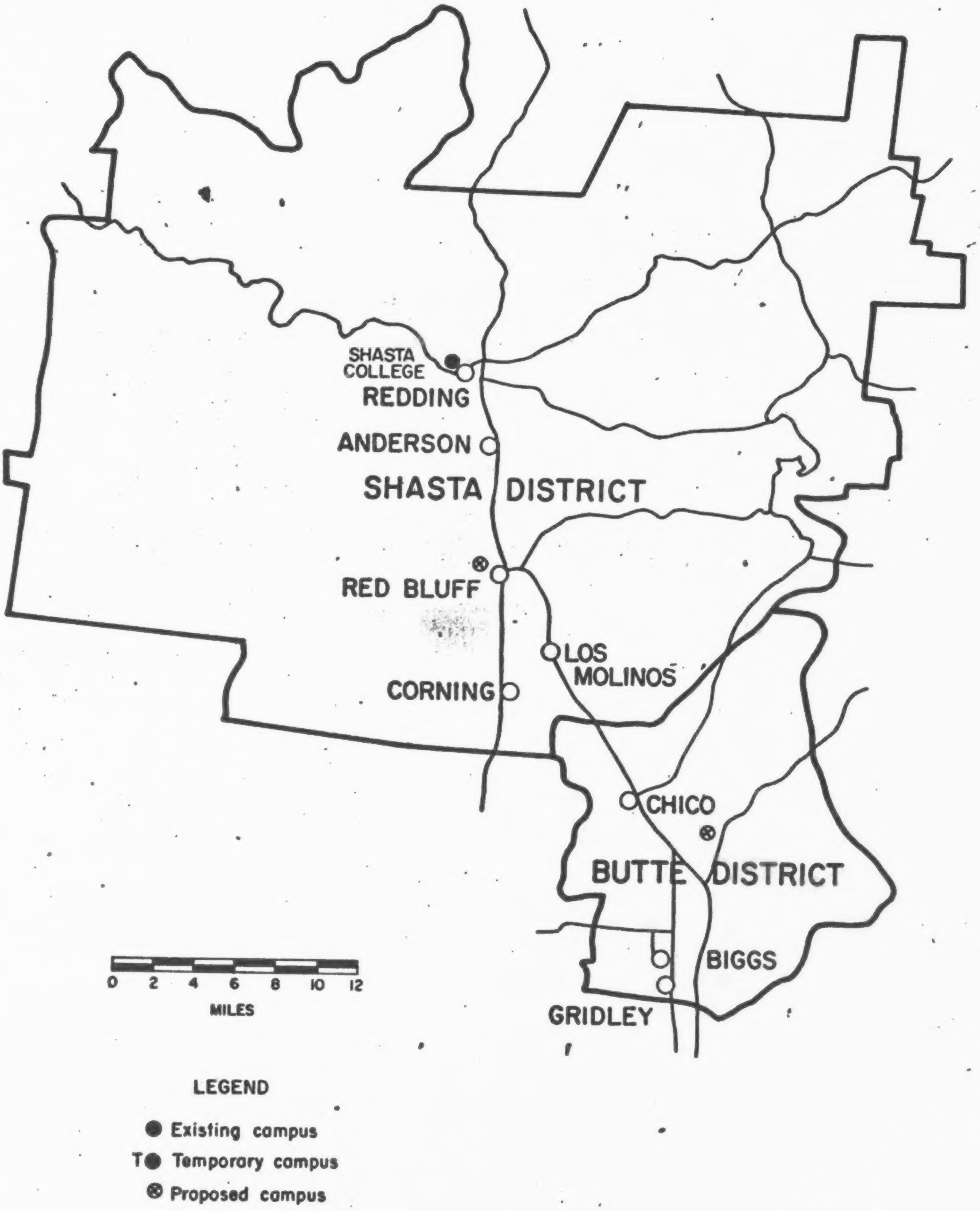
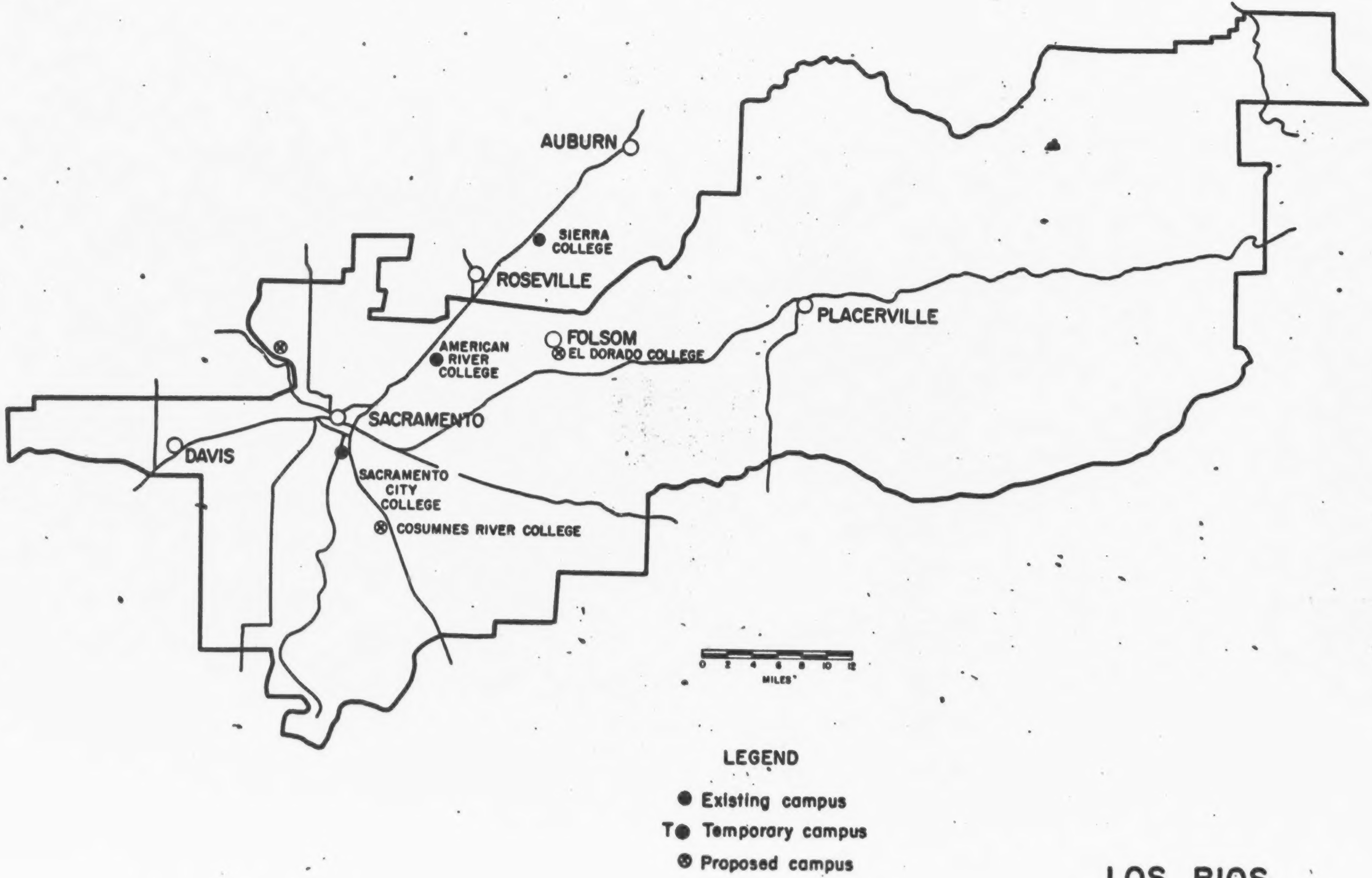

SHASTA COLLEGE
REDDING
ANDERSON
SHASTA DISTRICT
RED BLUFF
LOS MOLINOS
CORNING
CHICO
BUTTE DISTRICT
BIGGS
GRIDLEY
0 2 4 6 8 10 12
MILES
LEGEND
● Existing campus
T● Temporary campus
⊗ Proposed campus

SHASTA AND BUTTE
JUNIOR COLLEGE DISTRICTS


AUBURN
SIERRA COLLEGE
ROSEVILLE
FOLSOM
EL DORADO COLLEGE
PLACERVILLE
AMERICAN RIVER COLLEGE
SACRAMENTO
DAVIS
SACRAMENTO CITY COLLEGE
COSUMNES RIVER COLLEGE
0 2 4 6 8 10 12
MILES
LEGEND
● Existing campus
T● Temporary campus
⊗ Proposed campus

LOS RIOS
JUNIOR COLLEGE DISTRICT

Shasta Junior College District. The Shasta District, shown in Figure VI-5 enrolled 2,302 day-graded students in the fall of 1967 and is anticipated to enroll 4,386 in 1977. The district has one campus, Shasta College, near Redding, with an enrollment capacity of 3,163.

The district plans to expand Shasta College and to acquire a site in 1972 for a second campus in the vicinity of Red Bluff, with construction to begin in 1977.

The projected 1977 enrollment for the Shasta District and the potential for the next decade does not indicate the need for a second campus prior to 1977.

Butte Junior College District. Butte Junior College district--a new district--has a projection of 3,298 day-graded students in 1977. As seen in Figure VI-5, the district's initial college will be located in the geographic center of the district.

Los Rios Junior College District. The Los Rios district, shown in Figure VI-6, enrolled 12,723 day-graded students in the fall of 1967 divided between the two colleges of the district--American River College with 5,931 and Sacramento City College with 6,792. The district's projected enrollment for 1977 is 20,766. It now has an enrollment capacity of 13,637 to accommodate this projected 1977 enrollment--7,577 at American River and 6,050 at Sacramento.

To accommodate expected 1977 enrollments, the district plans three additional colleges: the first to be designated "Cosumnes River," to be located approximately eight miles south of the Sacramento campus, is scheduled to open in the fall 1970, with an enrollment of 1,500. The second, to be designated "El Dorado College," to be located approximately twelve miles east of the American River campus is planned for a fall 1972 opening, with an enrollment of 2,180. The third proposed college, as yet unnamed, will be located in the northwest corner of the district, approximately 8 miles from downtown Sacramento and 12 miles from the Sacramento campus. It is to open in 1976 with an enrollment of 2,000. The district plans for five colleges to be in operation in 1977 to serve an enrollment of 20,776.

Enrollments projected for the existing and the proposed colleges as shown in Table VI-8, indicates the Sacramento campus enrollment will decline from a peak enrollment of 8,883 in 1974, to 7,825 in 1977, and the American River campus will decline from a peak of 7,918 in 1971 to a low of 5,287 in 1977. The projected 1977 American River enrollment is smaller than its 1967 enrollment. The Cosumnes River campus is anticipated to grow from 1,500 in 1970, to 2,190 in 1977--an annual growth of less than 100 per year. The El Dorado campus has a higher expected annual growth of 250 per year.

Using data from Table VI-8, if the Sacramento campus can accommodate an enrollment of 8,883 as in 1974, and if American River can accommodate an enrollment of 7,918 as in 1971, then an additional enrollment capacity of only 4,000 would be needed by 1977 to house the projected enrollment for that year. This enrollment capacity could be realized if the two existing campuses were to be expanded to accommodate some 10,000 day-graded students--still within the maximum size established in the 1964 report--and further development of the Consumnes site could be delayed. The additional capacity needed might be decreased further if year-round operations were initiated. Or, if the two existing colleges were held to the peak enrollments shown in Table VI-8, 8,883 and 7,918, one additional college, prior to 1977 could easily accommodate the additional 4,000 day-graded students. Further, the proposed El Dorado campus, as shown in Figure VI-6, is somewhat less than 10 miles from Sierra College (Sierra Junior College District). The American River campus is approximately 12 miles by freeway from Sierra. Consideration could be given to possible accommodation of some Los Rios students at Sierra College. It would seem evident, however, that not more than three colleges would be required for the 1977 enrollment.

San Joaquin Delta Junior College District. The San Joaquin Delta district enrolled 4,602 day-graded students in fall 1967, housed in leased facilities in Stockton. The district has a projected enrollment of 7,492 for 1977 and plans to open a new college prior to 1975 to replace the leased facilities. The college will be located at Stockton.

Yosemite Junior College District. The Yosemite District enrolled 4,079 day-graded students in fall 1967. The 1977 projected enrollment is 6,858.

The district, shown in Figure VI-7, has one campus, Modesto Junior College, with an enrollment capacity of 4,088, and plans two additional campuses. The first new campus is under construction and will open in the fall 1969, at Columbia, with an enrollment of 354. The second new campus is planned for opening in 1972 with an enrollment of 784. The location of the second new campus is on the outskirts of Modesto.

According to present planning, therefore, the Yosemite district would be operating three campuses in 1977 to accommodate an enrollment of 6,858 day-graded students. As Table VI-9 indicates, two of these campuses would have an enrollment of less than 1,500 by that time--the Columbia campus having grown from 354 at its opening in 1969 to only 1,180 eight years later, a growth of 100 per year, and the second Modesto campus having grown from 784 at its opening in 1972 to 1,478 in 1977, a growth of 140 per year.

In view of economies-of-scale the enrollment projected for the planned college near Modesto could be best accommodated through additional enrollment facilities at the existing Modesto campus and/or through the diversion of enrollment to the Columbia campus--a campus with planned dormitory facilities. The second Modesto area college would not seem required by 1977.

TABLE VI-8

LOS RIOS JUNIOR COLLEGE DISTRICT
Day-Graded Student Projections
1967-1977

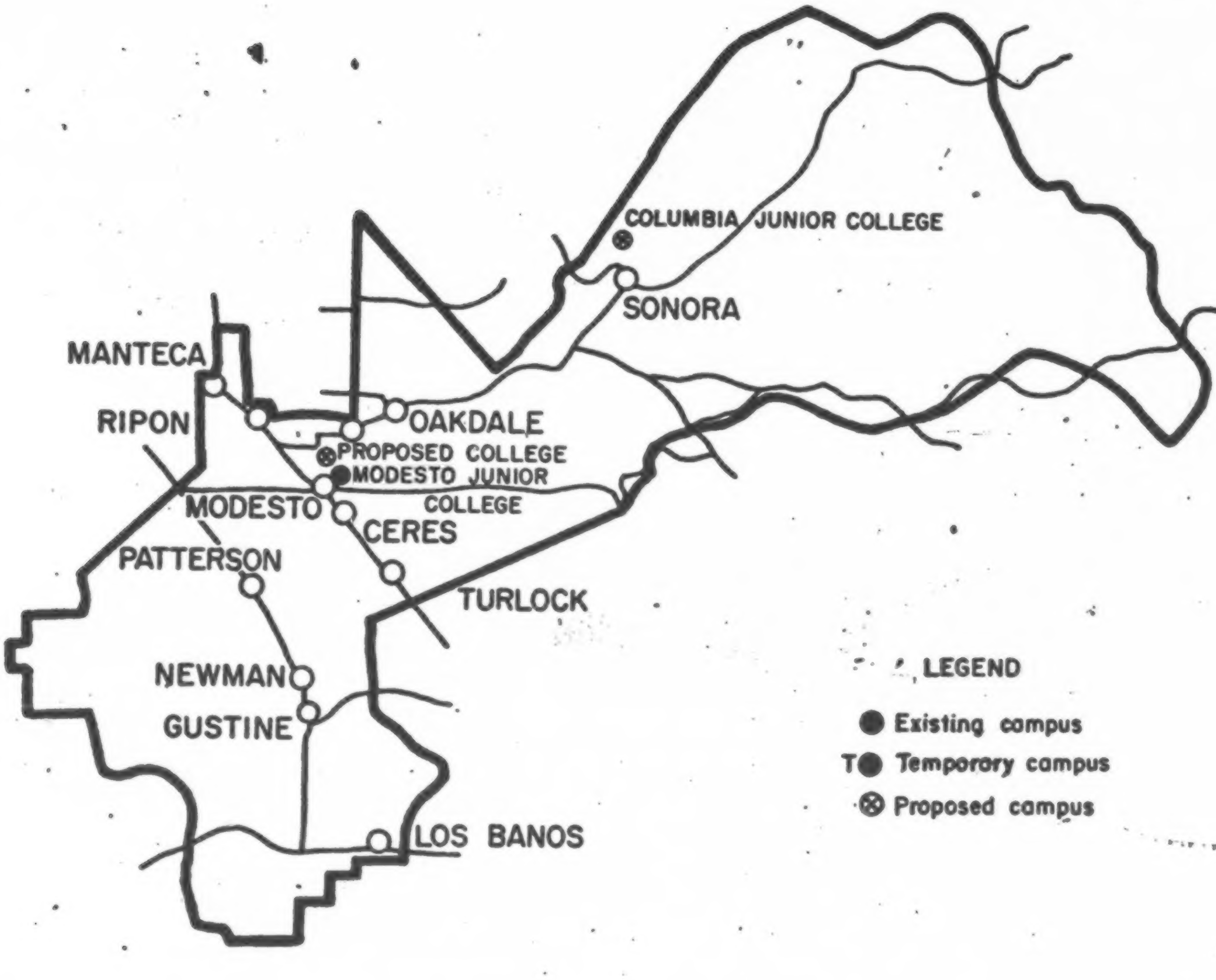
	Campus					
Fall Term	Sacramento City	American River	Cosumnes River	El Dorado	"C" (Natomas Area)	DISTRICT TOTAL
1967	6,792	5,931	-	-	-	12,723
1968	7,347	6,416	-	-	-	13,763
1969	7,953	6,945	-	-	-	14,898
1970	6,995	7,419	1,500	-	-	15,914
1971	7,486	7,918	1,580	-	-	16,984
1972	7,870	6,135	1,650	2,180	-	17,835
1973	7,998	6,188	1,720	2,370	-	18,206
1974	8,883	6,294	1,790	2,590	-	19,057
1975	8,689	6,405	1,850	2,800	-	19,744
1976	7,804	5,335	2,000	3,100	2,000	20,239
1977	7,825	5,287	2,190	3,324	2,150	20,776

These projections are based upon total projections as provided by the State Department of Finance.

State Center Junior College District. The State Center district, in Figure VI-8, enrolled 7,303 day-graded students in the fall term, 1967, with a projected enrollment of 12,361 in 1977. The district has two campuses: Fresno City College, with 5,828 in 1967, (almost exactly the same as its capacity) and Reedley Junior College, with a capacity of 1,788, enrolling 1,475.

To accommodate the additional projected enrollment for 1977, the district plans to expand both of its existing campuses and construct a third campus to begin operation in 1972. The enrollments projected for the three campuses are shown in Table VI-12.

The projections of Table VI-10 show the Reedley campus growing from 1,475 in 1967 to 2,349 in 1977--a growth of 87 students per year. The third campus, to be located near Madera, approximately 20 miles north of Fresno, is projected to grow from 1,140 in 1972 to 2,812 in 1977, a growth of 330 per year.


COLUMBIA JUNIOR COLLEGE
SONORA
MANTECA
RIPON
OAKDALE
PROPOSED COLLEGE
MODESTO JUNIOR COLLEGE
MODESTO
CERES
PATTERSON
TURLOCK
NEWMAN
GUSTINE
LOS BANOS
LEGEND
● Existing campus
T● Temporary campus
⊗ Proposed campus

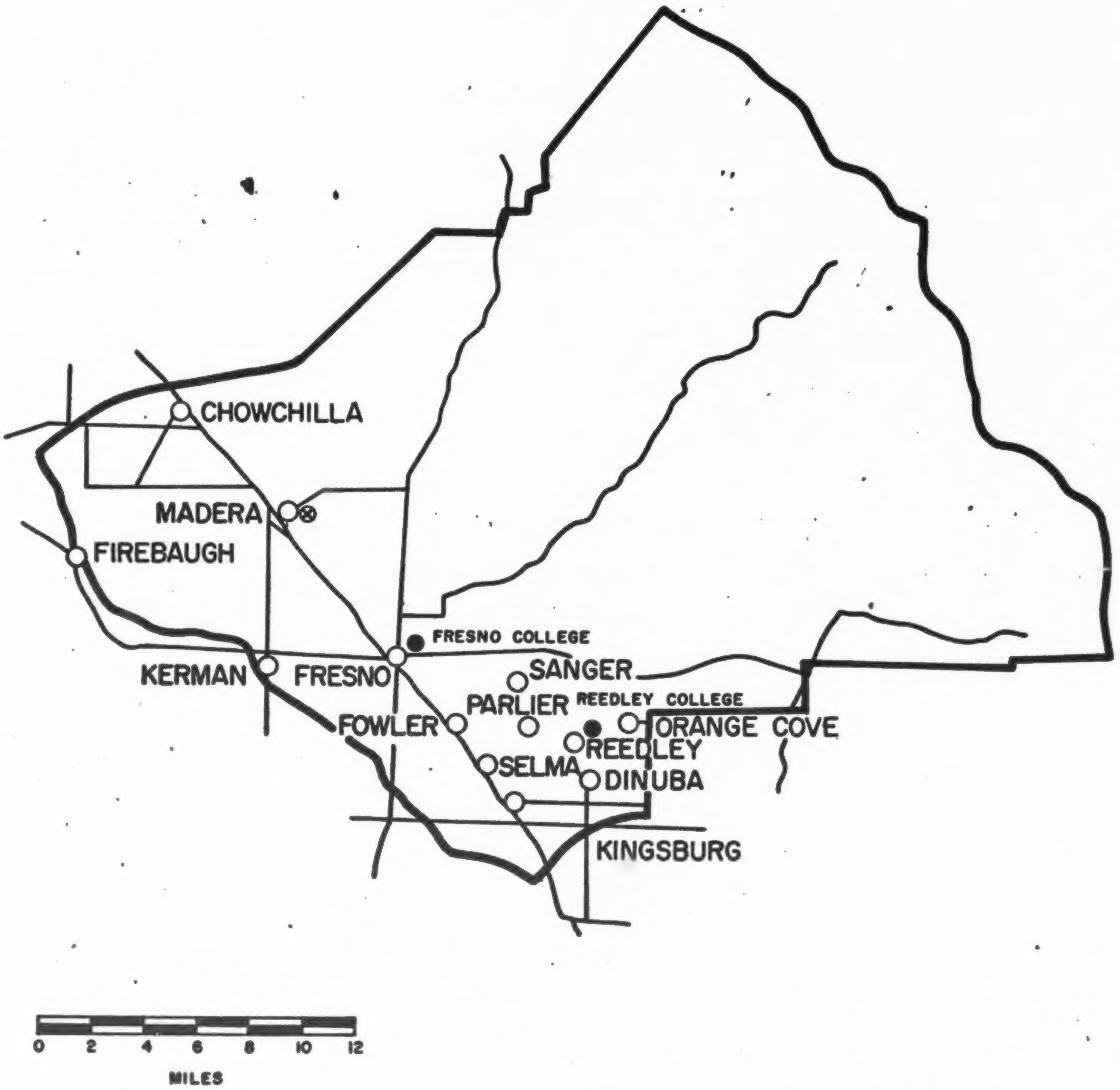
YOSEMITE
JUNIOR COLLEGE DISTRICT

TABLE VI-9

YOSEMITE JUNIOR COLLEGE DISTRICT
Day-Graded Student Projections
1967-1977

YEAR	MODESTO JUNIOR COLLEGE	"SECOND" COLLEGE	COLUMBIA	TOTAL
1967	4,079	-	-	4,079
1968	4,432	-	-	4,432
1969	4,400	-	354	4,754
1970	4,500	-	568	5,068
1971	4,600	-	779	5,379
1972	4,200	784	825	5,809
1973	4,200	951	895	6,046
1974	4,200	1,124	965	6,289
1975	4,200	1,317	1,040	6,557
1976	4,200	1,380	1,110	6,690
1977	4,200	1,478	1,180	6,858

Since the district's master plan provides for substantial site acquisition for the Fresno campus, the maximum enrollment capacity for Fresno could be increased to 10,000 and thus potentially accommodate all, or a major part of, the enrollment planned for the third campus--a campus to be located within commuting distance of Fresno. Residence facilities being planned for the Reedley campus could be increased to accommodate some of the district's enrollment projection. This would increase the growth of Reedley and provide for a larger, more efficient campus. If Fresno were increased to 10,000 and more dormitories were built at Reedley, a third campus would not appear required.


CHOWCHILLA
MADERA
FIREBAUGH
FRESNO COLLEGE
KERMAN
FRESNO
SANGER
PARLIER
REEDLEY COLLEGE
ORANGE COVE
FOWLER
REEDLEY
SELMA
DINUBA
KINGSBURG
0
2
4
6
8
10
12
MILES

LEGEND

● Existing campus
T● Temporary campus
⊗ Proposed campus

STATE CENTER
JUNIOR COLLEGE DISTRICT

TABLE VI-10

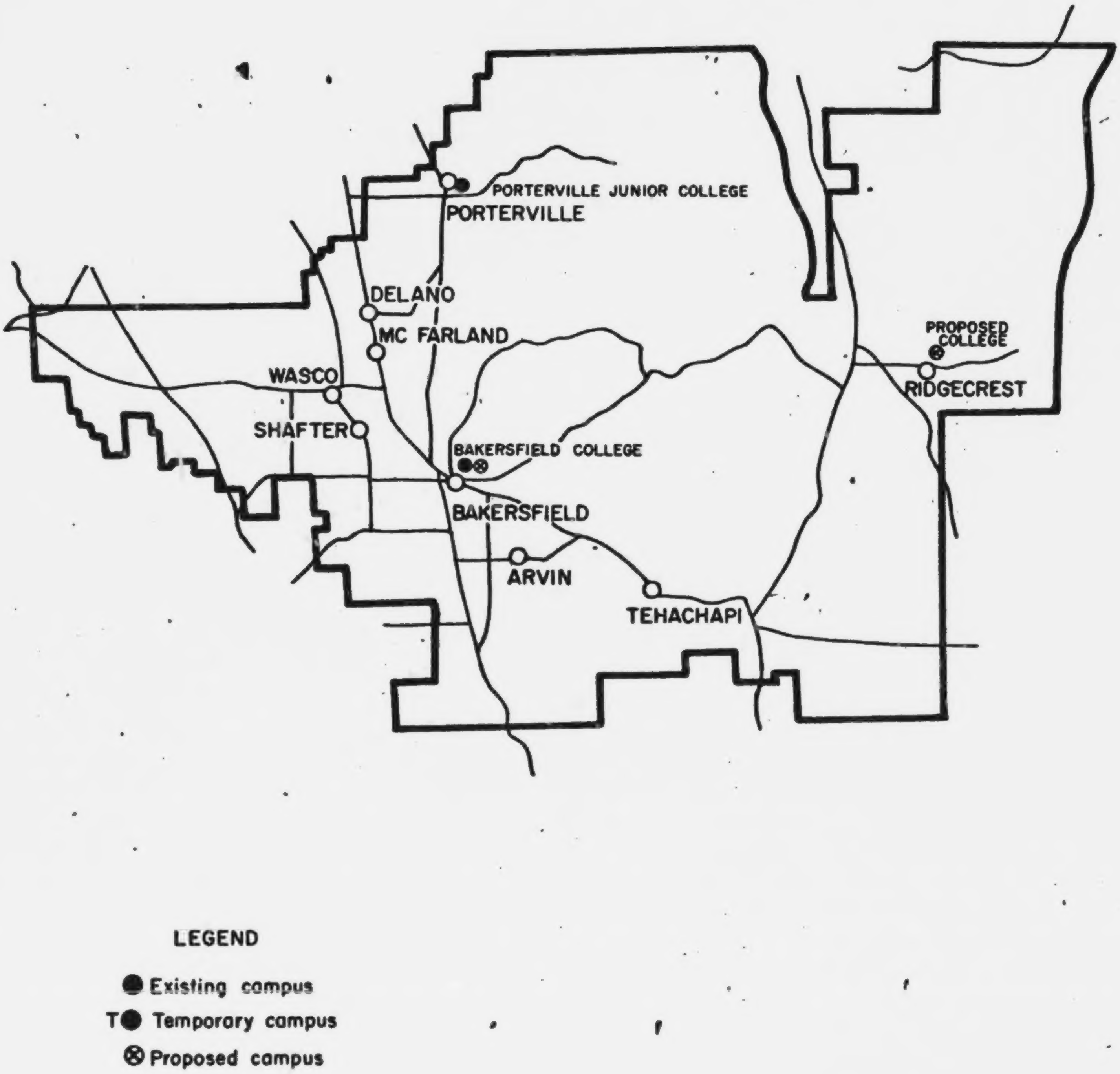
STATE CENTER JUNIOR COLLEGE DISTRICT
Day-Graded Student Projections
1967-1977

FALL TERM	FRESNO CITY COLLEGE	REEDLEY COLLEGE	THIRD CAMPUS	TOTAL
1967	5,828	1,475	-	7,303
1968	6,285	1,562	-	7,847
1969	6,676	1,648	-	8,324
1970	7,282	1,775	-	9,057
1971	7,839	1,899	-	9,738
1972	7,200*	2,008	1,140	10,348
1973	7,200	2,065	1,432	10,697
1974	7,200	2,137	1,794	11,131
1975	7,200	2,227	2,173	11,600
1976	7,200	2,292	2,509	12,001
1977	7,200	2,349	2,812	12,361

---

*Current plans call for the diversion of students from Fresno City College to a third campus beginning in fall, 1972.

Kern Junior College District. The Kern district, shown in Figure VI-9, enrolled 5,502 day-graded students in 1967 and 9,533 students are projected for 1977. The district has two campuses to accommodate the projected enrollment--Bakersfield Junior College with a 1967 enrollment of 4,407 and a capacity of 5,312, and Porterville Junior College, some 50 miles north of Bakersfield, with a 1967 enrollment of 706 and a capacity of 740. To provide enrollment capacity for its projected enrollment, the district plans to increase the capacity of the two existing campuses and build two additional campuses. The first new campus is planned for the vicinity of Ridgecrest, approximately 100 miles east of Bakersfield, to be ready for occupancy in 1971 with a capacity of 500 day-graded students increasing to 900 by 1980. The second campus is planned for the Bakersfield area with site acquisition scheduled for 1973 and occupancy not later than 1978.


PORTERVILLE JUNIOR COLLEGE
PORTERVILLE
DELANO
MC FARLAND
WASCO
SHAFTER
BAKERSFIELD COLLEGE
BAKERSFIELD
ARVIN
TEHACHAPI
PROPOSED COLLEGE
RIDGECREST
LEGEND
● Existing campus
T● Temporary campus
⊗ Proposed campus

KERN
JUNIOR COLLEGE DISTRICT

The difference between the capacity currently available to the district and projected enrollment for the district for 1977 is 3,481 day-graded students. These students might be accommodated through an increase in the capacity of the Bakersfield and Porterville campuses. The projected enrollment in the isolated Ridgecrest area could continue to be served as at present through an extension of Bakersfield College rather than through the construction of a new college which will not reach an enrollment necessary for efficient operation. New campus development could be postponed in the Kern District through 1977.

THE SOUTH-STATE DISTRICTS

The remaining nine districts planning new colleges, located in the southern part of the state and listed below, are shown in Figure VI-10.

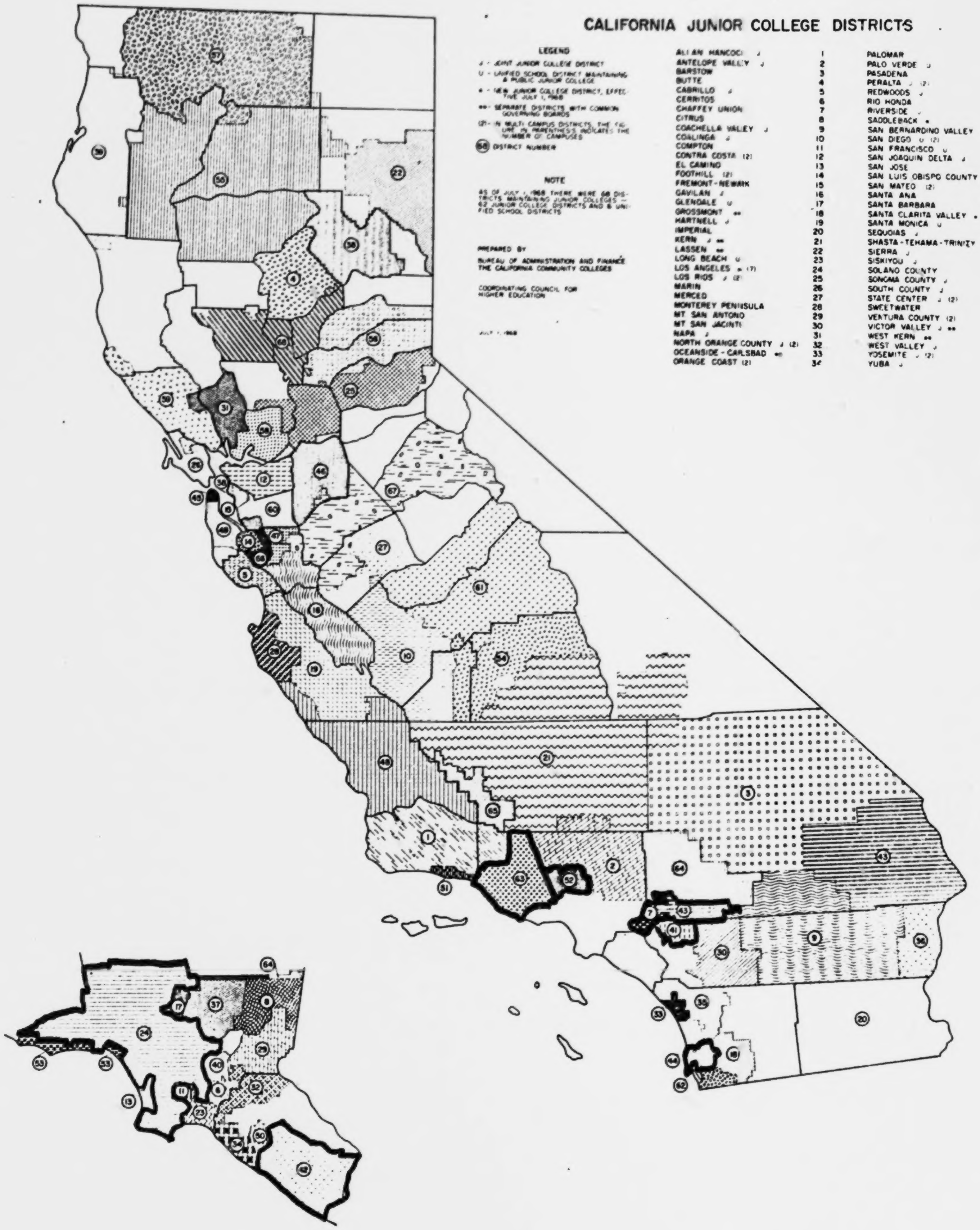
- Ventura County
- Santa Clarita Valley
- Los Angeles
- Chaffey Union
- San Diego
- San Bernardino Valley
- Riverside
- Coachella Valley
- Saddleback

The need for additional facilities in each of these districts is considered below.

Ventura County Junior College District. The Ventura District, shown in Figure VI-11, enrolled 4,709 day-graded students in the fall 1967, in two colleges: Ventura College with an enrollment of 3,541 and Moorpark College with an enrollment of 1,168. The district has a projected enrollment of 10,810 for 1977 with an existing enrollment capacity of 6,966--4,884 at Ventura College and 2,082 at Moorpark--to accommodate these students.

To provide facilities for the projected enrollments for 1977 the district plans to add facilities to the Moorpark campus and to add a third campus in the district. The third campus to be located near Oxnard, approximately ten miles from the Ventura campus and 21 miles from the Moorpark campus, is planned to open in 1972 with an enrollment of 1,250 day-graded students. Ten-year enrollment projections for all three colleges in Table VI-11 show that the enrollment projected for the Ventura campus in 1977 is less than the current capacity of the campus. All students in the district are within relatively easy commuting distance of either the Ventura or Moorpark campuses. Since enrollment can be readily accommodated by expanding the Ventura and Moorpark enrollment capacity, a third campus in the Ventura district does not seem called for until beyond 1977.

FIGURE VI-10



CALIFORNIA JUNIOR COLLEGE DISTRICTS

LEGEND

J - JOINT JUNIOR COLLEGE DISTRICT

U - UNIFIED SCHOOL DISTRICT MAINTAINING A PUBLIC JUNIOR COLLEGE

* - NEW JUNIOR COLLEGE DISTRICT, EFFECTIVE JULY 1, 1968

** - SEPARATE DISTRICTS WITH COMMON GOVERNING BOARDS

(2) - IN MULTI CAMPUS DISTRICTS, THE FIGURE IN PARENTHESIS INDICATES THE NUMBER OF CAMPUSES

(68) DISTRICT NUMBER

NOTE

AS OF JULY 1, 1968 THERE WERE 68 DISTRICTS MAINTAINING JUNIOR COLLEGES — 62 JUNIOR COLLEGE DISTRICTS AND 6 UNIFIED SCHOOL DISTRICTS

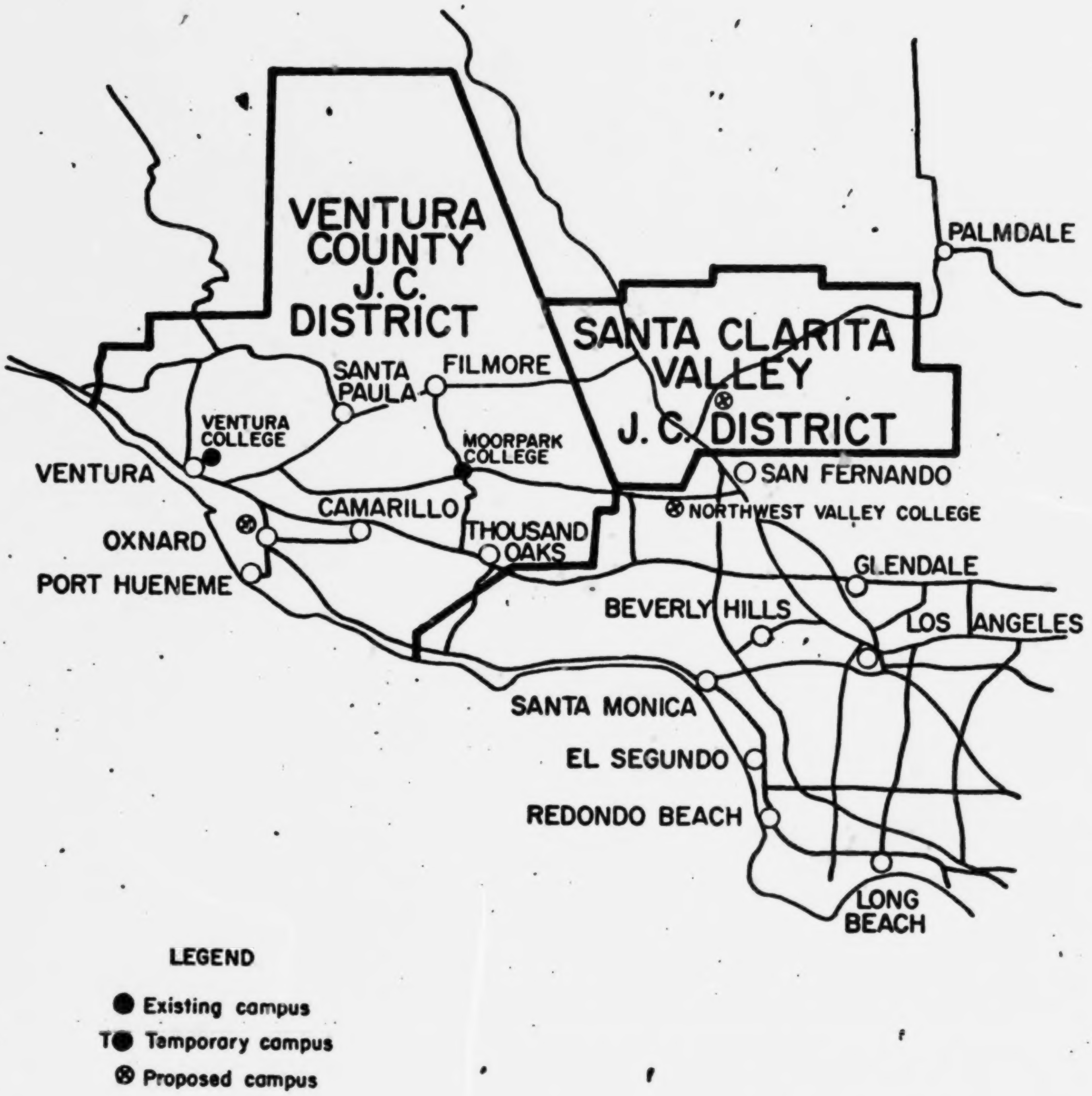
PREPARED BY

BUREAU OF ADMINISTRATION AND FINANCE
THE CALIFORNIA COMMUNITY COLLEGES

COORDINATING COUNCIL FOR
HIGHER EDUCATION

JULY 1, 1968

ALLAN HANCOCK J	1
ANTELOPE VALLEY J	2
BARSTOW	3
BUTTE	4
CABRILLO J	5
CERRITOS	6
CHAFFEY UNION	7
CITRUS	8
COACHELLA VALLEY J	9
COALINGA J	10
COMPTON	11
CONTRA COSTA (2)	12
EL CAMINO	13
FOOTHILL (2)	14
FREMONT-NEWARK	15
GAVILAN J	16
GLENDALE U	17
GROSSMONT **	18
HARTNELL J	19
IMPERIAL	20
KERN J **	21
LASSEN **	22
LONG BEACH U	23
LOS ANGELES * (7)	24
LOS RIOS J (2)	25
MARIN	26
MERCED	27
MONTEREY PENINSULA	28
MT SAN ANTONIO	29
MT SAN JACINTO	30
NAPA J	31
NORTH ORANGE COUNTY J (2)	32
OCEANSIDE - CARLSBAD **	33
ORANGE COAST (2)	34
PALOMAR	35
PALO VERDE J	36
PASADENA	37
PERALTA J (2)	38
REDWOODS J	39
RIO HONDO	40
RIVERSIDE J	41
SADDLEBACK *	42
SAN BERNARDINO VALLEY J	43
SAN DIEGO U (2)	44
SAN FRANCISCO U	45
SAN JOAQUIN DELTA J	46
SAN JOSE	47
SAN LUIS OBISPO COUNTY J	48
SAN MATEO (2)	49
SANTA ANA	50
SANTA BARBARA	51
SANTA CLARITA VALLEY *	52
SANTA MONICA U	53
SEQUOIAS J	54
SHASTA-TEHAMA-TRINITY J	55
SIERRA J	56
SISKIYOU J	57
SOLANO COUNTY	58
SONOMA COUNTY J	59
SOUTH COUNTY J	60
STATE CENTER J (2)	61
SWEETWATER	62
VENTURA COUNTY (2)	63
VICTOR VALLEY J **	64
WEST KERN **	65
WEST VALLEY J	66
YOSEMITE J (2)	67
YUBA J	68


VENTURA COUNTY J.C. DISTRICT
SANTA CLARITA VALLEY J.C. DISTRICT
PALMDALE
SANTA PAULA
FILMORE
VENTURA COLLEGE
MOORPARK COLLEGE
VENTURA
CAMARILLO
OXNARD
THOUSAND OAKS
PORT HUENEME
SAN FERNANDO
NORTHWEST VALLEY COLLEGE
GLENDALE
BEVERLY HILLS
LOS ANGELES
SANTA MONICA
EL SEGUNDO
REDONDO BEACH
LONG BEACH
LEGEND
● Existing campus
T● Temporary campus
⊗ Proposed campus

VENTURA AND
SANTA CLARITA VALLEY
JUNIOR COLLEGE DISTRICTS

TABLE VI-11

VENTURA COUNTY JUNIOR COLLEGE DISTRICT
Day-Graded Student Projections
1967-1977

FALL TERM	VENTURA	MOORPARK	OXNARD	TOTAL
1967	3,541	1,168	-	4,709
1968	3,645	1,678	-	5,323
1969	3,730	2,171	-	5,901
1970	3,936	2,521	-	6,457
1971	4,362	2,787	-	7,149
1972	3,600	2,931	1,250	7,781
1973	3,700	3,034	1,550	8,284
1974	3,800	3,351	1,875	9,026
1975	3,900	3,752	2,180	9,832
1976	4,000	3,887	2,491	10,378
1977	4,050	4,069	2,691	10,810

Santa Clarita Valley Junior College District. The Santa Clarita district shown in Figure VI-11, is newly established with a projected enrollment of 1,581 for 1977. The district is planning its initial campus in the vicinity of Newhall. The district plans to open temporary facilities in fall 1969 to enroll 398 and increase--as indicated above--to only 1,581 by 1977, a growth of less than 150 per year.

It would appear from Figure VI-11 that the student enrollment projected for the Santa Clarita district is within commuting range of the proposed Northwest Valley College of the Los Angeles district (see Figure VI-11). In view of this and the slow growth of the district's enrollment resulting in a high cost institution with limited-breadth educational program, establishment of the college could be delayed.

Chaffey Union Junior College District. The Chaffey district, shown in Figure VI-12, enrolled 3,385 day-graded students in 1967, and will enroll 6,281 in 1977. The district has one college, Chaffey, with a capacity of 4,669--about 1,600 day-graded students less than the 1977 enrollment projected for the district.

To accommodate the increased enrollment the district plans to substantially increase the enrollment capacity of Chaffey campus, and in 1972 to acquire a site for a second campus to be in operation by 1977. The new campus would be located near Chino, some 14 miles from the Chaffey campus.

Since Chaffey College is within effective commuting distance for all students of the district (a circle with a 15-mile radius centered at the Chaffey campus covers the entire residential area of the district) and since the district plans a maximum capacity for the Chaffey campus substantially higher than the enrollment projected for 1977, a second campus should not be needed until well after 1977.

San Bernardino Valley Junior College District. The San Bernardino Valley district, shown in Figure VI-12, enrolled 5,025 day-graded students in fall 1967 and expects 8,714 in 1977. The district has one college, San Bernardino Valley College, with an enrollment capacity of 6,934, which might be increased to 7,856 with year-round operation.

To accommodate the projected enrollment the district plans to increase the capacity of the San Bernardino campus and to add an additional college, to be designated Crafton Hills College, approximately 12 miles southeast of the San Bernardino campus.

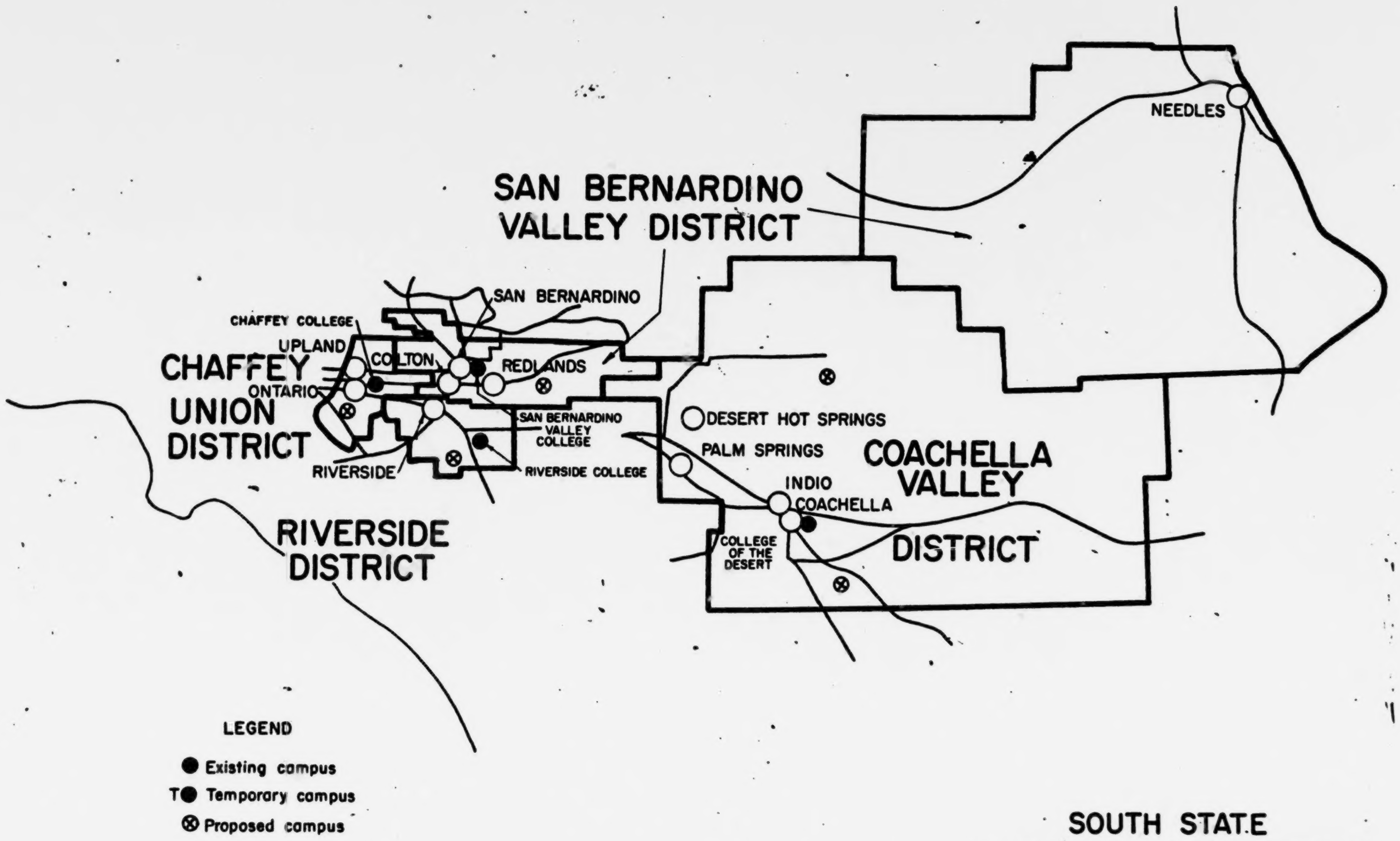
As the San Bernardino campus appears to be within commuting distance for all the students of the district and with the campus expanded further than now planned there then would seem to be no need for an additional campus until after 1977.

Riverside Junior College District. The Riverside district, shown in Figure VI-12, enrolled 3,780 day-graded students in 1967 and will enroll 6,880 in 1977. To accommodate this enrollment the district has one college, Riverside City College, with an enrollment capacity of 4,341.

The district plans to increase the enrollment capacity of the Riverside campus and to open a second campus in the southern portion of the district, approximately 8 miles from the Riverside campus, at a site already owned by the district.

Since a circle with a twelve mile radius, centered at the Riverside campus, covers the district, it would seem all students of the district are within commuting range of the Riverside campus. The enrollment projected for 1977 could be accommodated at the Riverside campus if it were expanded to a capacity of 6,880. If this were the case, an additional campus for the Riverside district appears not to be needed prior to 1977.

Coachella Valley Junior College District. The Coachella Valley district enrolled 1,253 day-graded students in 1967, with a projected enrollment of 2,548 for 1977. The district, shown in Figure VI-12, has one campus, College of the Desert, with an enrollment capacity of 1,425, located at Palm Desert. The district plans to increase the enrollment capacity of College of the Desert to 4,316 by 1977. The district also plans to build classroom facilities at two proposed new campuses. The


NEEDLES
SAN BERNARDINO
VALLEY DISTRICT
SAN BERNARDINO
CHAFFEY COLLEGE
UPLAND
CHAFFEY
COLTON
REDLANDS
ONTARIO
UNION
DISTRICT
SAN BERNARDINO
VALLEY
COLLEGE
RIVERSIDE
RIVERSIDE COLLEGE
DESERT HOT SPRINGS
PALM SPRINGS
COACHELLA
VALLEY
DISTRICT
INDIO
COACHELLA
COLLEGE
OF THE
DESERT
RIVERSIDE
DISTRICT
LEGEND
● Existing campus
T● Temporary campus
⊗ Proposed campus

SOUTH STATE
JUNIOR COLLEGE DISTRICTS

first, planned for 1972, would be located in the Twenty-Nine Palms area approximately 50 miles from the College of the Desert, with a capacity of 539 day-graded students. The second, planned for 1977, would be located 25 miles south of the College of the Desert, an initial capacity of 539.

The district, therefore, plans three campuses with a combined enrollment capacity of 5,394 to accommodate a projected 1977 enrollment of 2,548. The capacity proposed for College of the Desert alone now appears sufficient to accommodate the 1977 projected enrollment. Alternative means to accommodate the students in isolated areas would appear to be desirable rather than constructing small, limited-offering colleges.

Los Angeles City Junior College District. The Los Angeles district, shown in Figure VI-13, enrolled 42,971 day-graded students in fall 1967, and projects an enrollment of 80,000 for 1977. The 1967 enrollment was accommodated in the seven colleges of the district whose combined capacity is 57,359 day-graded students.

The district plans two additional colleges. The first, to be designated West Los Angeles College, is to be located near Culver City and will open in February 1969 with a projected enrollment of 1,200. It is planned to grow rapidly to 6,800 by 1977. The second campus, to be designated Northwest Valley College, is to be located in the northwest corner of the district and is planned for operation in 1971, with a projected enrollment of 2,000 and a growth to 4,600 by 1977. The projected enrollments of the colleges are shown in Table VI-12.

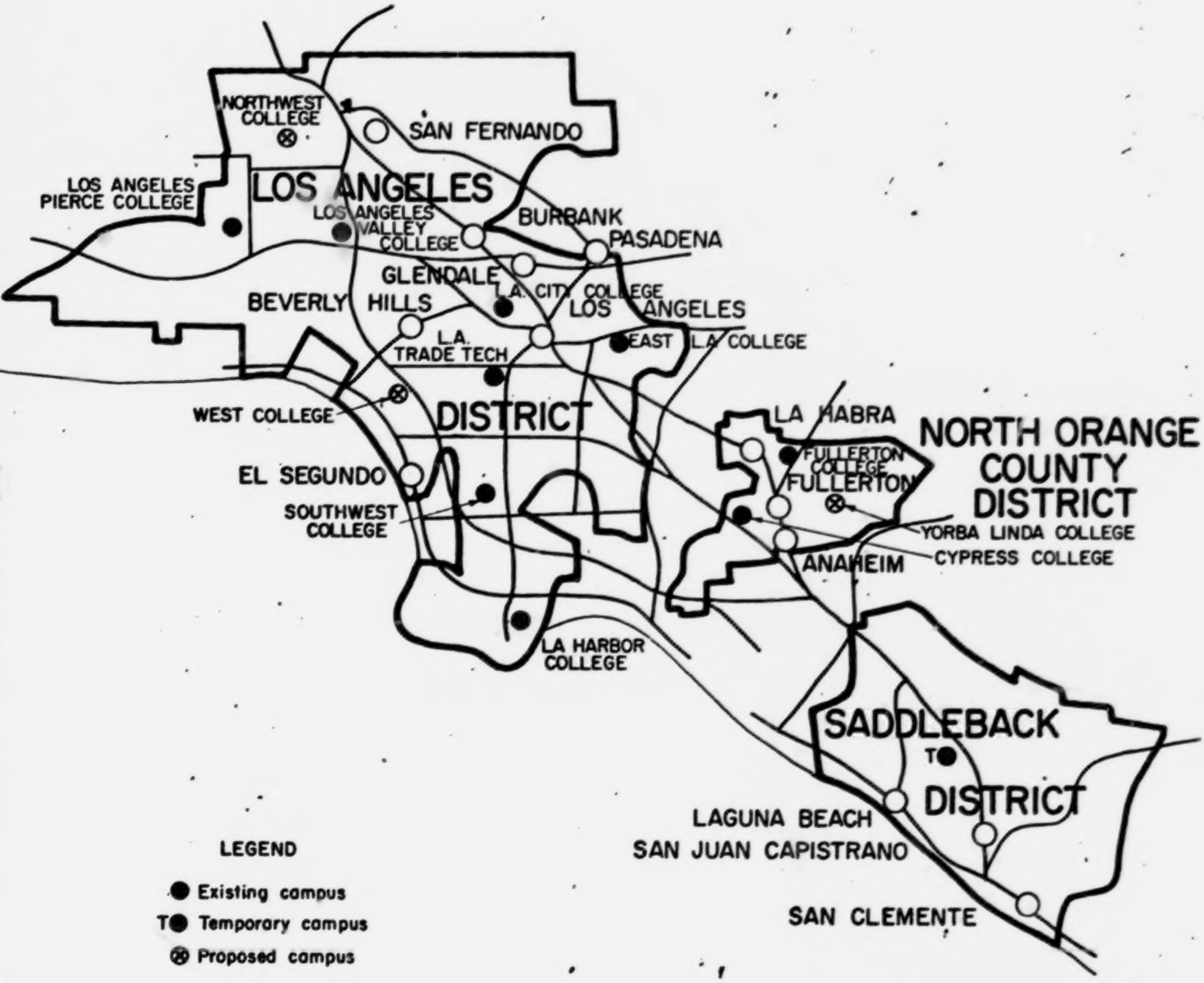
The proposed colleges for the Los Angeles District appear to be needed to house the projected enrollment of the district.

Saddleback Junior College District. The Saddleback district (shown in Figure VI-13) is a new district and had no enrollment in the fall term 1967. The enrollment projected for the district for 1977 is 5,663 day-graded students. The district is in the process of planning completion of its initial campus, which opened in the fall of 1968.

North Orange County Junior College District. The North Orange district, (Figure VI-13) enrolled 10,744 day-graded students in the fall 1967 and has 22,978 projected for 1977. The district's two colleges, Fullerton Junior College, located in Fullerton, and Cypress Junior College, located some four miles south near Anaheim, enrolled 8,555 and 2,189 day-graded students, respectively, in 1967. The combined capacity of the two colleges is 9,501--substantially smaller than the 1967 enrollment.

The district plans to increase the capacity of the Fullerton campus to 9,000 and the Cypress campus to 10,000 by 1977 and open a new campus in the fall term 1974 at a location near Yorba Linda approximately 8 miles from each existing campus. The projected enrollments for the campuses are shown in Table VI-13.

FIGURE VI-13


NORTHWEST COLLEGE
SAN FERNANDO
LOS ANGELES PIERCE COLLEGE
LOS ANGELES
LOS ANGELES VALLEY COLLEGE
BURBANK
PASADENA
GLENDALE
L.A. CITY COLLEGE
BEVERLY HILLS
LOS ANGELES
L.A. TRADE TECH
EAST L.A. COLLEGE
WEST COLLEGE
DISTRICT
EL SEGUNDO
SOUTHWEST COLLEGE
LA HARBOR COLLEGE
LA HABRA
FULLERTON COLLEGE
FULLERTON
NORTH ORANGE COUNTY DISTRICT
YORBA LINDA COLLEGE
CYPRESS COLLEGE
ANAHEIM
SADDLEBACK
T
DISTRICT
LAGUNA BEACH
SAN JUAN CAPISTRANO
SAN CLEMENTE
LEGEND
● Existing campus
T● Temporary campus
⊗ Proposed campus

LOS ANGELES, NORTH ORANGE COUNTY AND SADDLEBACK JUNIOR COLLEGE DISTRICTS

The additional campus for the North Orange District seems to be needed. (The opening date for the new campus might be delayed until 1977 if the Fullerton campus were to be expanded to 10,000 and if it is feasible to place both campuses on year-round operation.)

San Diego Unified School District. The San Diego district, shown in Figure VI-14, enrolled 9,826 day-graded students in fall 1967, with 4,407 at the district's City College and 5,419 at Mesa College located approximately seven miles north of the City College campus. The district has a projected enrollment of 17,947 for 1977 and has an existing capacity along with capacity under construction and/or funded, of 13,560 to accommodate this enrollment--4,494 at City College and 9,066 at Mesa College.

To accommodate the 1977 projected enrollment, the district plans to increase the capacity of the City and Mesa campuses and open a third college, Miramar College in 1970. The 1970 enrollment projected for this third campus is 330 day-graded students, to increase to 986 in 1973, to 1,640 in 1975 and to 2,947 in 1977. The college is to be located in the northern part of the district approximately eight miles from the Mesa campus.

The Mesa College now has a capacity of 9,000 day-graded students and, according to the district's Ten-Year Master Plan will have this capacity substantially increased. The district also plans to increase the City College enrollment capacity to at least 7,500 day-graded students. Since the students who would enroll at the proposed Miramar College are within commuting distance of the Mesa campus, opening a third college in the San Diego district may not be required until 1976.

TABLE VI-12

LOS ANGELES JUNIOR COLLEGES

DAY-GRADED STUDENT PROJECTIONS

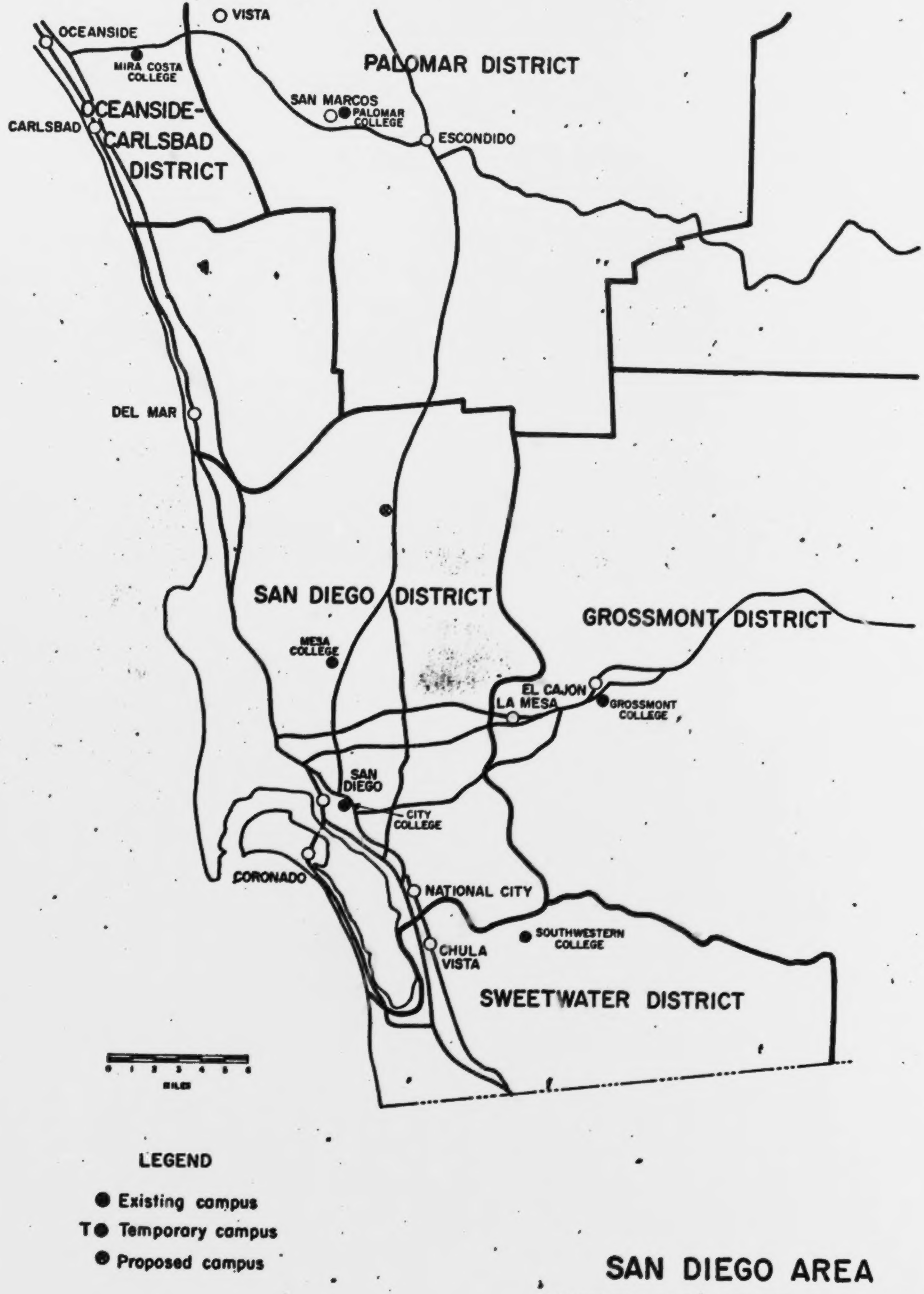
1967-1977

	City	East	Harbor	Northwest Valley	Pierce	Southwest	Trade-Technical	Valley	West	District Total
1967	10233	5768	4462		8150	647	4692	9019		42,971
1968	10600	6150	4800		8700	1900	5000	9400		46,550
1969	10800	6450	5100		9300	2600	5100	9700	1200	50,250
1970	10800	6600	5400		9400	3100	5300	10800	2000	53,400
1971	10900	6900	5500	2000	9700	3500	5500	10600	2400	57,000
1972	11100	7300	5600	2300	10350	4100	5700	10950	2700	60,100
1973	11200	7600	5800	2700	11000	4500	5900	11400	2900	63,000
1974	11400	7900	5900	3000	11600	5100	6100	11600	3400	66,000
1975	11600	8300	6000	3300	12100	5700	6300	11900	4800	70,000
1976	11800	8900	6300	4000	12700	6400	6500	12400	5500	74,500
1977	12300	9400	6600	4600	13200	7100	7000	13000	6800	80,000

TABLE VI-13

NORTH ORANGE COUNTY JUNIOR COLLEGE DISTRICT
Day-Graded Student Projections
1967-1977

FALL TERM	CYPRESS	FULLERTON	YORBA LINDA	TOTAL
1967	2,189	8,555	-	10,744
1968	3,511	8,500	-	12,011
1969	5,014	8,500	-	13,514
1970	6,027	9,000	-	15,027
1971	7,656	9,000	-	16,656
1972	9,122	9,000	-	18,122
1973	9,978	9,000	-	18,978
1974	10,000	9,000	1,266	20,266
1975	10,000	9,000	2,654	21,654
1976	10,000	9,000	3,374	22,374
1977	10,000	9,000	3,978	22,978


OCEANSIDE
VISTA
MIRA COSTA COLLEGE
PALOMAR DISTRICT
SAN MARCOS
PALOMAR COLLEGE
OCEANSIDE-CARLSBAD DISTRICT
CARLSBAD
ESCONDIDO
DEL MAR
SAN DIEGO DISTRICT
GROSSMONT DISTRICT
MESA COLLEGE
EL CAJON
LA MESA
GROSSMONT COLLEGE
SAN DIEGO
CITY COLLEGE
CORONADO
NATIONAL CITY
SOUTHWESTERN COLLEGE
CHULA VISTA
SWEETWATER DISTRICT
0 1 2 3 4 5 6
MILES
LEGEND
● Existing campus
T● Temporary campus
● Proposed campus

SAN DIEGO AREA
JUNIOR COLLEGE DISTRICTS

Findings

From the foregoing the following findings can be made:

I. With Respect to Projected Enrollments

1. The increase in Junior College enrollments during the period 1967-77 is expected to amount to 256,063, day-graded students, a somewhat greater total than the 189,000 increase experienced in the period 1957-1967.

2. On the basis of projections of high school graduates and the 18-24 year age group beyond 1980, subject to abrupt changes in college-going patterns, the number of Junior College enrollments may decline for a period of years after 1980 before resuming an upward trend--but at a lower rate of increase than in previous years.

II. With Respect to Enrollment Capacity

1. On a statewide basis, enrollment capacity in the Junior Colleges in 1967 exceeded actual enrollment by 78,555 day-graded students, or by 26%.

2. Sixty-seven, or 83% of the Junior Colleges had excess capacity in 1967--amounting to 84,106 day-graded students.

3. About one-half of the Junior Colleges used less than 75% of their capacity in 1967.

4. Eighteen, or 30%, of the districts will have excess capacity in 1977--based upon existing capacity in 1967 plus that under construction and/or funded in 1967.

5. The Junior College Construction Law of 1967 in the years to come will contribute toward a balancing of student demand and capacity as well as substantially improved facility planning. Evidence already exists that this is occurring.

III. With Respect to Year-round Operation

1. If it were determined feasible after cost-benefit analyses to institute year-round operation in all Junior Colleges, the additional enrollment capacity needed in 1977 could be reduced up to 32%, if the enrollment in the summer term equaled 40% of the fall term enrollments. The number of districts not needing additional capacity would then be increased from 18 to 26.

IV. With Respect to Campus Size (Enrollment)

1. There are economies-of-scale in Junior College capital and operating programs.

    a. Unit costs decrease significantly with increase in college size.

   b. Larger colleges have a greater range of courses in a greater variety of subject fields and at a lower unit cost.

2. In 1967, nine colleges enrolled more than 8,000 day-graded students and by 1977, fourteen colleges plan to grow beyond 10,000.

V. With Respect to Commuting Distance/Time

1. Approximately 13,000 potential Junior College enrollees are estimated to be beyond a 30 mile/45-minute commuting distance from an existing Junior College.

2. In most districts a Junior College is within 15 miles or less of each resident.

VI. With Respect to the Need for Additional Enrollment Capacity for 1977 Enrollments

1. Seventeen, or 25%, of the 68 Junior College districts may not require additional capacity for 1977 projected enrollments.

2. Fifty-one, or 75%, of the 68 Junior College districts may need additional capacity for 1977 projected enrollments.

3. Where justified on the basis of cost-benefit analyses, Junior Colleges could reduce the need for additional enrollment capacity through operation on a year-round basis (wherein summer term enrollment equaled 40% of fall-term enrollment).

VII. With Respect to District Plans to Provide Additional Enrollment Capacity for 1977 Projected Enrollments

1. The Junior College Construction Act of 1967 requires each Junior College district to plan ten years in advance for the capital-outlay needs of the district and submit up-dated plans, annually, to the Board of Governors. Such plans are to be based upon at least such elements as:

   a. Academic plans.
   b. Department of Finance 10-year enrollment projections.
   c. Current enrollment, office and library capacity of the district.
   d. An annual inventory of facilities.

2. An inspection of district plans found most lacking:

   a. Academic plans.
   b. Statement of Plans planning for full 10-year period (required by law).

   c. No detail map of campus or district.
   d. Back-up materials.

3. Twenty-four, or 47%, of the districts needing additional enrollment capacity for 1977 projected enrollments plan to enlarge existing facilities--leading some colleges to grow to sizes more than 10,000.

4. Twenty-seven, or 53%, of the districts requiring additional capacity for the 1977 projected enrollments (and one district not needing any additional capacity) plan to provide capacity through the establishment of new colleges.

5. The 28 districts planning new colleges had a combined enrollment of 168,653 day-graded students in 1967 accommodated on 40 campuses for an average of 4,216 per campus.

6. In 1977 the 28 districts planning new colleges will have a combined enrollment of 338,036 day-graded students and plan to accommodate these on 77 campuses, for an average of 4,390 per campus.

7. Twenty-six of the districts planning new colleges plan to have them in operation before the districts' existing campuses attain an enrollment of 9,000--with the majority establishing new colleges before existing campuses attain an enrollment of 5,000.

8. District determination of the need for new colleges, and location of, give no consideration to plans of adjoining districts.

9. Junior Colleges with projected enrollments of less than 2,500 in some instances are being planned within distances of 4-5 miles of other colleges.

10. Only three districts plan colleges to accommodate isolated areas of the district. (Areas not within 30 miles or 45 minutes commuting time of existing campuses.)

VIII. With Respect to the Need for Additional Junior Colleges in the Twenty-Eight Districts Planning New Colleges Prior to 1977

1. Based upon an analysis of the districts' 10-year construction plans in relationship to maximum campus size, reasonable commuting distance, and projected enrollments the following is indicated:

   A. New Junior Colleges seem to be required in the following districts prior to 1977:

      a. Initial campus for Butte Junior College District
      b. Initial campus for Saddleback Junior College District

c. Initial campus for San Joaquin Delta Junior College District
d. Initial campus for West Valley Joint Junior College District
e. Additional campus in North Orange County Junior College District
f. Two new campuses in Los Angeles City Junior College District
g. Initial campus for Fremont-Newark Junior College District
h. Initial campus for Solano County Junior College District
i. Two initial campuses for Peralta Junior College District

B. New Junior Colleges (beyond those in operation fall term, 1967, 1968, or committed to open in 1969) appear not to be required in the following districts prior to 1977:

a. Chaffey Union Junior College District
b. Coachella Valley Junior College District
c. Contra Costa Junior College District
d. Foothill Junior College District
e. Kern Joint Junior College District
f. Los Rios Junior College District
g. Marin Junior College District
h. Riverside Junior College District
i. San Bernardino Valley Joint Union Junior College District
j. San Diego Unified School District
k. San Jose Junior College District
l. Shasta Joint Junior College District
m. Sonoma County Junior College District
n. State Center Junior College District
o. Ventura County Junior College District
p. Peralta Junior College District (beyond two initial campuses)
q. West Valley Joint Junior College District (beyond initial campuses)
r. San Mateo Junior College District
s. Yosemite Junior College District

C. The following newly formed district appears not to need a new college prior to 1977, but should initially accommodate district students in Los Angeles District:

a. Santa Clarita Valley Junior College District

In addition to the question of specific college plans, the following general conclusions can be drawn:

1. Prior to the establishment of new Junior Colleges by a district, the feasibility and desirability of operating existing campuses on a year-round basis should be determined.

2. Economies-of-scale in respect to Junior College operating and capital outlay costs as well as the greater breadth of program offerings made possible with increasing size, supports the desirability of expanding existing Junior Colleges when site location permits. An enrollment of at least 10,000 day-graded students for planning purposes appears to be appropriate.

3. Potential Junior College enrollment beyond reasonable commuting distance/time is too small and too scattered to justify additional campuses.

4. Potential Junior College enrollment in isolated areas should be accommodated through extension courses, off-campus centers, residence facilities at existing campuses, or other measures.

5. Specific and detailed guidelines for ten-year Junior College construction plans should be developed to improve the quality of these plans.

6. The need for, and location of, new Junior Colleges could be best determined on a regional basis without regard to district boundaries.

7. Means must be found to permit the construction and operation of Junior Colleges designed to serve two or more districts.

CHAPTER VII

OVERVIEW AND RECOMMENDATIONS CONCERNING CALIFORNIA'S NEEDS FOR ADDITIONAL CENTERS

General Observations

This present study, the most recent in a series of similar analyses prepared in the last 15 years, has been prepared within the framework of several explicit assumptions as set forth in Chapter I. In addition, "options" which relate in great measure to the ways in which enrollments beyond existing capacity of public higher education may be accommodated have been set forth and considered within the context of the growth patterns of campuses of the University of California, the California State Colleges and individual Junior Colleges. In some instances, possible future decisions such as those designed to redistribute lower division enrollments among the systems, might substantially change the options and hence the conclusions of this study. Furthermore, application of particular options may require intensive analysis on cost-benefit bases in order to determine if, in fact, the option can be employed in a given situation--for example, initiation of year-round operations at a particular Junior College.

The pressures generated by rapidly mounting higher education enrollments have provided the main impetus for previous surveys of facility needs in California and throughout the nation. A leveling-off in the rates of increase may now be in sight. Data indicate that the California high school graduating class in 1980 for the first time in many years will be no greater than that of the year before. In the early 1980's high school graduates may drop in number to levels equal of the mid-1970's. Public schools in the immediate years ahead, because of the lessened growth rate, will be experiencing a period where they may have excess physical capacity; will higher education, then, eventually experience the same?

At the present time unknown changes in college-going and persistence rates make it difficult to determine the extent to which the "80's" will be a period of relief from enrollment pressures for higher education. In recent years many efforts have been made to encourage all college-capable youth to attend institutions beyond high school and to remain to complete a given program. These efforts will continue, but it is unlikely that the total high school graduating group will ever be entirely accommodated in higher education, certainly not by 1980. Nevertheless the college-going population and the extent of time individuals remain in collegiate programs can be expected to increase by some significant factor. National data, for example, indicate that presently the equivalent of 41.9% of the 18-21 year old age group are pursuing degree-credit programs. In 1978-79 this percentage is expected to increase to 51.0%--what will occur in the ten-year period 1979-88 or what will be the case in California is not clear. Furthermore, national and state policy decisions and practices having the impact of requiring two years of advanced training for all, or nearly all, individuals as a minimum entry level to occupational life can have great effects upon the need for new facilities, particularly those of the Junior Colleges.

Continued reassessment of California and national trends must necessarily go forward and in turn be related to questions concerning the need for new facilities for higher education.

The above factors indicate that the projection of total demand for higher education over an extended term is unreliable. Though present projections are made with great care, they cannot fully give the correct weight to the many trends which affect college-going and persistence.

Establishment of additional collegiate facilities on an orderly basis must be accomplished, therefore, in the light of less than perfect projections of demand--it follows, therefore, that no plan for the establishment and construction of new colleges and universities should be made without providing for flexibility and adjustment with the passage of time and as trends become apparent. (This is especially true when a college enrollment plateau may be a possibility.) Such flexibility was included in the 1964 recommendations of the Council within its determinations of "a definite ultimate need" for facilities in specific locations, but without precise definition as to when these new facilities should come on the line in other than the most general sense.

This report looks ahead through 1977-1978 for the three systems of public higher education and in so doing makes a number of findings concerning possible need for new facilities as well as increasing the ability of existing colleges and universities to accommodate expanding enrollment in the next decade. However, recognizing the profound changes which can be made in any projection of demand for higher education, recommendations concerning need for facilities should be subject to review in 1972 when the Council and its staff will again survey the need for new centers of public higher education.[1]

Gross projection of enrollments in an optimal situation should not be the only basis upon which the need for new facilities is determined. Other factors must be considered as well. In this report intensive analyses have been suggested in relation to critical decisions in respect to (1) year-round operations, (2) annual growth of colleges and campuses, (3) maximum enrollments at colleges and campuses, (4) more extensive use of colleges and campuses in evenings and Saturday, (5) in the case of State Colleges, possibilities of central admissions and redirection of students, and (6) in the instances of Junior Colleges, the weighing of local needs for additional campuses with those of larger regions.

Academic plans and facilities needs on a statewide basis have yet to be fully integrated. In recent years campuses and colleges of the three public systems (and the private colleges and universities in many instances as well) have greatly improved their academic planning capability. The melding of individual plans on a statewide basis will be a clear possibility when Junior College plans are complete. An overall statewide academic and facility plan for public higher education, developed after careful analysis of relevant issues, can now be developed. Such a plan would improve the precision of future surveys of the need for new centers--and such surveys would indeed be a part of such a continuing statewide plan. Exploration of this basic improvement in California higher education planning is indicated.

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[1] In part supported by a Federal Comprehensive Planning Grant through the CCHE, the State Department of Finance in the next year is seeking to improve higher education enrollment projections through development of participation rates by age group. Such improvement should permit longer range assessment of facilities needs than is presently the case.

It has been suggested that any plan for the establishment of new centers of higher education must be considered flexible. New enrollment patterns, changes in educational practices and programs, and funding availability are among the many factors which may influence the establishment of a new center of higher education.

Summary of Report

Population Trends. The survey compares projected enrollments for higher education with presently planned segmental enrollment capacity and planned enrollment ceilings. The most significant factor in this comparison--one which suggests that utmost caution be exercised--is that within the years ahead, particularly after 1975, a plateau in the annual number of high school graduates will be reached. An expected downturn in graduates will be experienced after 1980. Similarly the expansion of the 18-24 year old age group will slow.

These population trends suggest that whereas the 1950's and 1960's have been periods of rapid growth for higher education, the 1970's and 1980's may see a leveling-off of growth. The extent to which the leveling-off occurs, however, is as yet quite uncertain due to changes in college-going rates, length of time in colleges, etc. It is within this general background of these population trends that this report has been prepared.

Distribution of Higher Education Opportunities. The report after considering the state as a whole finds that, overall, existing Junior Colleges, State Colleges and campuses of the University of California are rather well distributed in terms of the existing population, as well as the expected growth in the years to come. It is estimated that few prospective students are beyond a reasonable commuting distance of an existing Junior College. Furthermore, the bulk of the state's population is served by an existing nearby State College. In great measure, the determination of the need for new colleges and universities in California is a question of providing additional services to population centers already being served by existing colleges rather than of providing initial service.

Community interest has been expressed during this present study for the authorization of new State Colleges or campuses of the University in the Northern Sacramento Valley, the Central San Joaquin Valley, the Glendale-Burbank-East Valley Area of Los Angeles Metropolitan Area, and the West Los Angeles Area, and in San Diego County. The needs of these areas are considered in the report against the statewide pattern of growth for the two segments of higher education.

The report finds that the need has not yet been supported for a specialized graduate health science-agricultural program operated either jointly by the State Colleges and the University in the Fresno area or singly by the University. Such a center was first proposed in 1964 in the context of the Council's last study of additional centers as an interim step to establishment of a new University campus.

State Colleges. Expected student demand for State College programs has been examined through 1977-78 (the limit of official state projections) and compared with presently planned enrollment capacity of the segment. This examination discloses that some 7,000 students may not be accommodated in that year in existing colleges given their present plans for growth. The two colleges where there is anticipated to be an unaccommodated demand are San Jose State College and San Diego State College.

The report explores a number of options for accommodating these additional enrollments--namely, greater use of evenings and Saturday, greater utilization of the summer term than presently planned, redirection of students to State Colleges where maximum planned enrollment capacity has not been reached and increasing the planned maximum enrollment ceiling at topped-out colleges when feasible.

The report concludes that a judicious combination of these options of accommodating enrollments can be applied with the result that no eligible student seeking admission to a State College will be denied a space through 1977-78. In view of this, it is found that the three State Colleges for which there was determined a definite ultimate need in the 1964 action of the Council need not be constructed in the immediate future. The next survey (if conducted in 1972 as suggested herein) will again consider the timing for these colleges in light of the data and projections at that time.

Advanced site acquisition has gone forward for the three State Colleges proposed in 1964.[1] With these acquisitions it may be assumed that the lead time required for opening any one of the proposed colleges will need not be great. Should construction be authorized for any of the three colleges in 1973 as a result of the 1972 survey it is assumed the college could begin taking students by 1978-79 or shortly thereafter if such a need were determined.

University of California. Projected enrollment demand for University training has been considered through 1977-78 and compared with University plans to accommodate increasing numbers of students. This comparison indicates that the rate of increase in demand for undergraduate enrollment will exceed the University's presently-planned rate of increase in accommodating students, resulting in an unmet total undergraduate enrollment demand of 13,334 by 1977.

The several options for accommodating additional enrollments, short of establishment of new campuses or colleges, were examined for application to the University situation. It is found, as with the State Colleges, that a judicious combination of these options would enable the University to accommodate the additional enrollments anticipated through 1977-78 without the construction of a new campus of the University.

The two campuses for which there was determined a definite ultimate need in the 1964 study, therefore, need not go forward to the construction stage in the immediate years ahead. The 1972 study will again review the timing for these campuses in light of data and projections available at that time.

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[1] Such action was approved by the Council.

Junior Colleges. The report, for the first time, has sought to examine in a comprehensive manner the need for new Junior College facilities on a statewide basis. A primary reason for this review is the increasing participation of the state in Junior College capital outlay programs. Such examination has gone forward making use of individual Junior College district capital outlay plans, data collected on present college capacities, and district-by-district enrollment projections through 1977-78.

This survey finds there is need for a number of new colleges now planned by several districts throughout the state. It also finds from the data available that some districts may not need to go forward with the establishment of planned additional new Junior Colleges in their districts. These finding are based on existing and projected capacity at existing colleges as well as application of methods which are designed to accommodate additional students on existing campuses as was done in the case of the State Colleges and the University of California.

It is recognized in making these findings that special local circumstances not reflected in data on capacities and projected enrollments available on a statewide basis may modify findings in individual cases.

Among the major findings of this review is that there is a clear need for planning of Junior College facilities on a regional basis, which implies multi-district planning. Changes in statute may be required to accomplish such regional developments.

The specific recommendations of the report are as follows:

Recommendations

In light of its 1968 study of the need for new centers of public higher education in California and the findings thereof, the staff recommends:

I. Concerning the Next Survey of the Council

The Council, recognizing the need for continuous review of the needs for facilities and the impact of population and social factors which affect college enrollments, should again review the subject of the need for additional centers of public higher education in 1972 for report to the 1973 Legislature. Subsequent recommendations should be considered with this fact in mind.

II. Concerning the Need for New California State Colleges

A. The California State Legislature, State officials and the Trustees of the California State Colleges should be advised that enrollment demands for State College programs in excess of the currently planned facilities at existing colleges through 1977-78 may be met by a combination of the following measures applied in a judicious manner. Funds for additional buildings at existing colleges will continue to be needed.

1. Greater use of facilities in evenings and on Saturday;
2. Greater utilization of the summer term and earlier inauguration of year-round operations than are presently planned for some colleges;
3. Redirection of students from topped-out colleges to those where planned enrollment ceilings have not been reached and where such redirection would not inconvenience students;
4. Increasing present maximum planned enrollment ceilings at topping-out colleges where physical site permits and costs and benefits warrant.

With the application of these measures establishing of additional State Colleges, including opening the three colleges for which the Council in 1964 indicated that there was "a definite ultimate need," need not occur. Before the Council again reviews the timing and need for new colleges and campuses in 1972 in the light of data and projections available at that time.

B. The Trustees of the California State Colleges should report annually to the Council in June of each year beginning in June 1969 through June 1972 on those measures taken and/or planned which are designed to permit the enrolling of all eligible students seeking State College programs, such reports to include an evaluation of the success of those measures.

C. The Regents of the University of California and the Trustees of the California State Colleges should be advised that any proposal for specialized University programs in the central San Joaquin Valley in the health sciences and in graduate study in agriculture, or for joint University and State College participation would be premature. The Council may consider the subject further whenever concrete University and/or State College proposals are set forth.

III. Concerning the Need for New University of California Campuses

A. The California State Legislature, State officials and the Regents of the University of California should be advised that anticipated undergraduate enrollment demand through 1977-78 in excess of enrollment currently planned at existing University campuses may be met by a combination of the following measures applied in a judicious manner. Application of these measures implies an increase in the annual growth for the segment. Funds for additional buildings on existing campuses will continue to be needed.

1. Greater use of existing facilities by scheduling classes in evening hours and on Saturday;
2. Greater utilization of the summer term under year-round operations than is presently planned;

3. Increasing annual growth and present planned maximum enrollment ceilings where physical site permits and costs and benefits warrant;
4. Continuing present redirection policies.

With the application of these measures, establishment of additional campuses of the University of California, including those two campuses for which there was found to be a "definite ultimate need," need not occur before the Council again reviews the timing and need for new colleges and campuses in 1972 in the light of data and projections available at that time. The Council should amend the following action, taken on November 24, 1964.

A "definite ultimate need" exists for a University campus in the Los Angeles area (the counties of Los Angeles, Ventura, San Bernardino, Riverside and Orange) and for one in the San Francisco Bay Metropolitan Area (the counties of San Francisco, Marin, Solano, Sonoma, Napa, Contra Costa, Alameda, Santa Clara and San Mateo). It appears at this time authorization for the establishment of one of these campuses may be recommended by the Coordinating Council to the Legislature in (1969) 1973 and recommendation for the second campus approximately in (1975) 1978.

Advance acquisition of sites for a University of California campus in either the Los Angeles or San Francisco Bay Area would be justified when the Regents of the University present evidence and the Council finds that "carefully restricted circumstances" warrant it, "such as where land may not subsequently be available without excessive cost or where there may be special opportunity to obtain the land," and upon such findings the Council will recommend appropriations for the acquisition of such sites.

B. The Regents of the University of California should report annually to the Council in June of each year beginning in June 1969 through June 1972 on those measures taken and/or planned which are designed to permit the enrolling of all eligible students seeking University of California programs, such reports to include an evaluation of the success of those measures.

C. The Regents of the University of California and the Trustees of the California State Colleges should be advised that any proposal for specialized University programs in the central San Joaquin Valley in the health sciences and in graduate study in agriculture, or for joint University and State College participation would be premature. The Council may consider the subject further whenever concrete University and/or State College proposals are set forth.

IV. Concerning the Need for Additional California Community Colleges

A. The California State Legislature, State officials and the Board of Governors of the California Community Colleges should be advised that the staff review of the need for additional community college facilities employed the following information available on a statewide basis:

1. Individual Junior College district ten-year construction plans as submitted pursuant to the 1967 Junior College Construction Act;
2. Enrollment projections prepared by the State Department of Finance for each Junior College district through 1977-78;
3. Data concerning individual college capacity to house students.

B. Based upon the analysis of this information new colleges are probably required prior to 1977-78 in the following instances:

1. Initial campus for Butte Junior College District
2. Initial campus for Saddleback Junior College District
3. Initial campus for San Joaquin Delta Junior College District
4. Initial campus for West Valley Joint Junior College District
5. Additional campus for North Orange County Junior College District
6. Two new campuses in Los Angeles City Junior College District
7. Initial campus for Fremont-Newark Junior College District
8. Initial campus for Solano County Junior College District
9. Two initial campuses for Peralta Junior College District

C. In light of present projections and other data available on a statewide basis it appears that additional colleges (in addition to those in operation in the fall term 1968 or committed to open in 1969) planned by the following Junior College districts may not be required through 1977-78.

1. Chaffey Union Junior College District
2. Coachella Valley Junior College District
3. Contra Costa Junior College District
4. Foothill Junior College District
5. Kern Joint Junior College District
6. Los Rios Junior College District
7. Marin Junior College District
8. Riverside Junior College District
9. San Bernardino Valley Joint Union Junior College District
10. San Diego Unified School District
11. San Jose Junior College District
12. Shasta Joint Junior College District
13. Sonoma County Junior College District
14. State Center Junior College District
15. Ventura County Junior College District
16. Peralta Junior College District (beyond two initial campuses)

17. West Valley Joint Junior College District (beyond initial campuses)
18. San Mateo Junior College District
19. Yosemite Junior College District

Enrollment projections do not seem to indicate that a college is required for the newly established Santa Clarita district until after 1977-78. District students may be accommodated in the adjacent Ventura or Los Angeles districts.

The staff recognizes that local circumstances which do not appear in data available to Council staff may warrant the establishment of a college in some of the districts where this report raises questions as to the necessity of an additional campus.

The Board of Governors of the California Community Colleges should be advised to investigate intensively the situation in any district where this report questions the necessity of a new campus, before approving an application for state funds for a project for part or all of a new campus. The analysis should include such items as local enrollment projections vs. official enrollment projections of the Department of Finance, the development of cooperative programs with adjacent districts, special community problems, and community support for district plans. In every instance, the Board of Governors should examine costs and benefits of ways and means of increasing individual Junior Colleges' capacity to accommodate increasing enrollments in comparison to costs and benefits of establishing new campuses, taking into account such methods as:

1. Causing colleges to move more quickly to year-round operations following intensive cost-benefit study of each college situation;
2. Increasing college planned enrollment ceilings and adding additional facilities subject to limitations of site and/or site acquisitions;
3. Increasing use of existing facilities through expansion of evening programs, late afternoon classes and classes on Saturday;
4. Increasing planned annual growth to bring a college to maximum planned ceilings earlier.

D. The Board of Governors of the California Community Colleges should be advised to review and improve guidelines for ten-year Junior College construction plans; such to be accomplished in time for application to plans to be submitted in the fall of 1969.

E. The Board of Governors of the California Community Colleges should be advised to study and consider ways and means by which regional development of Junior College facilities may go forward. Such consideration may include development of proposed statutory changes to facilitate regional cooperation in the establishment and operation of Junior College facilities by two or more Junior College districts.

F. The California State Legislature, State officials, and the Board of Governors of the California Community Colleges should be advised that projects should not be approved nor funds appropriated for any project for all or part of a new campus, the necessity for which is questioned in this report, until the Board of Governors has completed Items C and E above.

G. The Board of Governors of the California Community Colleges should report annually to the Coordinating Council for Higher Education, beginning in June 1969 through June 1972 as to its progress in respect to:

1. Determining the need for a new campus in any district where the need is questioned in this report and which applies for state funds for all or part of such campus;
2. Improvements in guidelines for ten-year Junior College construction plans;
3. Ways and means of facilitating regional cooperation in the establishment and operation of Junior College facilities by two or more Junior College districts.

V. Concerning Development of a Long-Range Academic and Facilities Plan for Higher Education

The Director of the Council and his staff should develop, with the consultation and cooperation of the segments of public and private higher education, a design for a Long-Range Academic and Facilities Plan for Higher Education in California, such design to be presented to the Council for review by September 1969. The development of the Plan, together with its continuing revisions, will enable a more precise definition of the types of facilities required by public higher education in the future, as well as their locations.

APPENDIX A

RECOMMENDATIONS OF THE COUNCIL
ADOPTED NOVEMBER 24, 1964

It is recommended that:

(1) The Council advise the Legislature that it should authorize in 1965 a California State College in Kern County.

(2) The Council on November 24, 1964, adopted the following policy:

> Where the Council finds there is a definite ultimate need for a campus, acquisition of sites in advance of authorization to start a campus may be justified in carefully restricted circumstances, as found by the Council, such as where land may not subsequently be available without excessive cost or where there may be special opportunity to obtain the land.

In conjunction with the above stated policy, current data show that:

> (a) A "definite ultimate need" exists for new California State Colleges to serve students in the following areas, listed alphabetically: Contra Costa County, the San Mateo County-Santa Clara County area, and in Ventura County in a location to serve students from both the cities of Ventura and Oxnard as well as from cities in northern Los Angeles County. It appears at this time that authorization for the establishment of one of these three campuses may be recommended by the Coordinating Council to the Legislature prior to 1969 and the second and third campuses in 1969 or thereafter.
>
> (b) A "definite ultimate need" exists for a University campus in the Los Angeles area (the counties of Los Angeles, Ventura, San Bernardino, Riverside and Orange) and for one in the San Francisco Bay Metropolitan Area (the counties of San Francisco, Marin, Solano, Sonoma, Napa, Contra Costa, Alameda, Santa Clara and San Mateo). It appears at this time authorization for the establishment of one of these campuses may be recommended by the Coordinating Council to the Legislature in 1969 and recommendation for the second campus approximately in 1975.

(3) The Council further advise the Legislature that sites for institutions of public higher education should be acquired in advance of legislative authorization of the institutions through use of the following procedures:

> (a) Advance acquisition of sites for a State College located in Contra Costa County, for a State College located to serve students from San Mateo and Santa Clara Counties, and for a State College located to serve students from Ventura County and Los Angeles County will be justified in each instance where the Trustees of the California State Colleges present evidence, and the Council finds that "carefully restricted circumstances" warrant it, "such as where land may not subsequently be

available without excessive cost or where there may be special opportunity to obtain the land", and upon such findings the Council will recommend appropriations for the acquisition of such sites.

(b) Advance acquisition of sites for a University of California campus in either the Los Angeles or San Francisco Bay Area would be justified when the Regents of the University present evidence and the Council finds that "carefully restricted circumstances" warrant it, "such as where land may not subsequently be available without excessive cost or where there may be special opportunity to obtain the land", and upon such findings the Council will recommend appropriations for the acquisition of such sites.

(4) And the Council further advise the Legislature not later than 1969 and each five years thereafter until all needs have been met, it will conduct a statewide survey of the then existing needs for additional centers of public higher education and the need for advanced acquisition of sites.

(5) And the Council further advise the Legislature to expedite the inclusion of all areas of the State within Junior College districts.

(6) In the light of the request of the University of California, the Council indicate that it will consider a staff report on the need for specialized programs such as graduate agriculture and graduate health science programs in the San Joaquin Valley at its December 15 [1964] meeting or at such subsequent meeting as the data may be available.

APPENDIX B

CONSIDERATIONS IN INCREASING PLANNED MAXIMUM ENROLLMENTS FOR EACH INSTITUTION

Three general problems deserve consideration in respect to the policy issue of increasing planned maximum enrollment by 50%. First, unless the physical plant of a college can be expanded sufficiently, planned maximums cannot be increased by 50% or any other factor. Information as to the extent to which an expansion of physical facilities is feasible at each campus is presented in the chapters dealing with the individual segments of public higher education.

Second, if operating costs per student tend to increase as enrollments exceed currently planned maximums, then an increase up to such a level as at least 50% greater could be questioned. Here evidence of the relationships between size of a college or campus and operating costs per student have been examined, as shown in the chapters dealing with specific segments. The evidence presented in them shows that economies of scale are reached at maximum sizes well below a maximum enrollment 50% larger than current planned maximums, and that these economies continue to exist as size increases. However, since the analyses are based upon current data, no inferences can be drawn about the persistence of these economies at enrollments beyond those used.

Third, if capital outlay costs per student tend to increase as enrollments exceed currently planned maximums, then an increase to a level at least 50% greater could be questioned. Here evidence of the relationship between the size of a college or campus and capital costs per student have been examined as shown in the chapters dealing with individual segments. Here the analysis indicates that capital costs per student continue to decrease as enrollments per institution increase.

Fourth, if educational quality diminishes as enrollments increase at least 50% above currently planned maximums, questions could be raised about the desirability of the increase. A search of the literature reveals two major areas of concern: (1) great size may lead to impersonal treatment of students; (2) great size may lead to lesser quality of educational programs.

In respect to impersonalizations resulting from great size, a search of the literature reveals no research studies which bear significantly upon this problem. Nor did a search of the literature reveal research studies dealing with the effects, if any, of impersonalizations upon student learning. Rather the examination revealed a number of articles, some of them polemic in tone, in which unsupported assertions are made in respect to size, impersonalization, and student learning. One can conclude that many persons hold strong opinions in this area but that almost no one has examined the area carefully.

In respect to the relationship between great size and the quality of graduate educational programs, a major study by Allan Cartter[1] compares the opinions of knowledgeable faculty about graduate departments in 29 academic disciplines in terms of rated quality of their graduate faculty and rated effectiveness of their graduate programs. The study includes 21 institutions with enrollments of 27,500 or over among the colleges and universities examined. Only four of these large institutions failed to receive a favorable rating in any of the 29 graduate academic departments surveyed. The highest ratings "Distinguished" and "Extremely Attractive" appeared 37 and 48 times respectively. Other favorable ratings (Good, Attractive, Acceptable plus, Adequate plus, Acceptable, Strong and Adequate) occurred 575 times. Thus the total number of favorable ratings was 660 out of a possible 1,218. It seems clear that large size does not preclude quality in graduate programs.

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[1] Cartter, Allan, An Assessment of Quality in Graduate Education, (Washington, D.C.: American Council on Education).

Since no similar appraisal of the quality of undergraduate education exists, comparisons of the quality of undergraduate departments and faculty are not included here. The existence of graduate programs of reputed high quality has no demonstrable relationship to the existence of undergraduate programs of comparable quality.

Much of the above material is concerned with size and quality in colleges and universities offering bachelors and graduate degrees. Junior Colleges are sufficiently different in student bodies and educational programs to require a different type of analysis in order to ascertain whether or not they could become larger with no loss of quality. The analysis presented in Appendix F-2 illustrates that quality, as indicated by richness of educational offerings, is shown to increase as size increases. The same analysis shows that per student costs decrease as size increases. The maximum enrollment used in this study, 10,000 students, is within the range of sizes where programs become richer and costs decrease.

APPENDIX C

STAFF RECOMMENDATIONS CONCERNING LOWER DIVISION AND CALIFORNIA STATE COLLEGES AND UNIVERSITY OF CALIFORNIA[1]

A. The findings of this report indicate that elimination of lower division programs is feasible in any college or university.

B. Although feasible, elimination of lower division is not desirable in all instances specifically where institutions have primarily an undergraduate function and orientation. At the present time, this applies to all existing State Colleges because while many have large enrollments, all have a predominately undergraduate orientation and emphasis. Smaller campuses of the University fall as well into this category.

C. Elimination of lower division programs at institutions with large enrollments and substantial graduate programs may prove desirable if the elimination of the lower division furthers a desired policy objective. This conclusion may apply to large campuses of the University.

D. Findings of this study suggest that a new and dynamic form of collegiate institution offering junior and senior level and graduate programs may be developed. Consequently in planning for new institutions, the Trustees of the California State Colleges and the Regents of the University of California should consider establishing one or all of these centers without the lower division.

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[1] Feasibility and Desirability of Eliminating Lower Division Programs at Selected Campuses of the University of California and the California State College, Staff Report 67-1, January 6, 1967. The recommendations have not been adopted.

APPENDIX D

SUPPORTING MATERIAL CONCERNING CALIFORNIA STATE COLLEGES

APPENDIX D-1

ECONOMIES-OF-SCALE IN CAPITAL CONSTRUCTION COSTS AND OPERATING COSTS WITH RESPECT TO ENROLLMENT LEVELS AND GROWTH RATES CALIFORNIA STATE COLLEGES

Capital Construction Costs

To determine this relationship between costs of capital construction, present enrollment levels and historical growth rates, yearly construction costs, including minor capital improvements, were accumulated on a yearly basis for each State College for the period 1945-46 through 1966-67.

Using actual costs as reported in the annual Governor's budgets, yearly costs were brought up to present value by applying the current Engineering News Record "Cost Index" (1070.4). Table D-1.1 shows the total capital construction costs in 1967 dollars of the total physical facilities for each State College for the period 1945-1966.

The data show the capital construction cost for each student being served, ranged from a low of $3,949 at Long Beach State to a high of $15,454 for the new State College at Dominguez Hills.[1] The mean cost for each student served is $6,408. The yearly trend of construction costs per student was also computed for each college to determine the effect of the variations in growth rates. These data are shown in Table D-1.2.

A comparison of the construction cost per student and the total enrollment or increase since 1945 for each State College as shown in Figure D-1.1 reveals a nonlinear regression. In other words, the economies-of-scale in reducing costs are more evident as a college increases in size from 2,000 to 4,000 enrollment than are the cost reductions when size increases from 12,000 to 14,000 enrollment. There is no indication in Figure D-1.1 as to when diseconomies-of-scale might set in for enrollment increases beyond the 13,760 shown in the figure.

The trend line[2] in Figure D-1.1 was used to estimate the capital construction cost per student for enrollments ranging from 200 to 14,000.

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[1] To ascertain the construction cost for each student being served, it was assumed that construction funds made available in one year were for enrollments two years hence. This assumption is made also by the Department of Finance in their Capital Outlay Budgets. The enrollment data used were the projected 1968-69 total FTE (8-5) students for those colleges which began operations since 1945 and the difference between this total and 1945-46 enrollments for those colleges in operation prior to 1945.

[2] The following formula was used for fitting the trend line:

$$Y = \frac{1}{a + bX}$$

$$(I)\ \Sigma(Y') = Na + b\,\Sigma(X)$$

$$(II)\ \Sigma(XY') = a\,\Sigma(X) + b\,\Sigma(X^2)$$

where Y = Observed enrollment increase by college
Y' = The reciprocal of Y
X = Observed Capital Cost/FTE by college
N = Number of observations
a = Unknown
b = Unknown

TABLE D-1.1

CAPITAL COSTS PER FTE (8-5) STUDENT IN 1967 DOLLARS, CALIFORNIA STATE COLLEGES

(Facilities Constructed Prior to 1945 Not Included)

Institution[1]	Total Cumulative Capital Costs 1945-1966[2]	Enrollment Increase 1945-1968	Capital Costs Per FTE
Chico	$37,321,965	6,530	5,715
Dominguez Hills	12,671,885	820	15,454
Fresno	58,543,027	6,579	8,898
Fullerton	36,640,586	5,560	6,590
Hayward	35,633,154	5,740	6,208
Humboldt	32,310,968	3,310	9,762
Long Beach	54,335,709	13,760	3,949
Los Angeles	68,585,715	10,190	6,731
Sacramento	47,400,639	7,860	6,031
San Bernardino	11,990,080	1,140	10,518
San Diego	73,107,563	12,809	5,708
San Fernando	57,516,434	11,010	5,224
San Francisco	59,740,370	9,985	5,983
San Jose	93,257,946	12,678	7,356
Sonoma	19,666,406	1,660	11,847
Stanislaus	9,606,499	910	10,557
	$708,328,946	110,541	

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[1] Data for the two Cal Poly colleges were not included since historical capital costs were not seperately available for the two prior to 1963-64.

[2] Yearly Capital Costs adjusted to present value by the Engineering News Record Index.

TABLE D-1.2

HISTORICAL CAPITAL COSTS PER FTE (8-5) STUDENT AT THE VARIOUS STATE COLLEGES BEGINNING OPERATIONS AFTER 1945[1]

	Year	Los Angeles	Sacramento	Long Beach	San Fernando	Fullerton	Hayward	Stanislaus	Sonoma	Dominguez Hills	San Bernardino
Actual	1947	883	1477	--	--	--	--	--	--	--	--
	1948	270	392	--	--	--	--	--	--	--	--
	1949	155	255	419	--	--	--	--	--	--	--
	1950	186	340	158	--	--	--	--	--	--	--
	1951	255	2037	99	--	--	--	--	--	--	--
	1952	271	8255	6033	--	--	--	--	--	--	--
	1953	412	9750	6494	--	--	--	--	--	--	--
	1954	385	10177	4685	--	--	--	--	--	--	--
	1955	326	7441	4547	--	--	--	--	--	--	--
	1956	1627	6350	3950	1408	--	--	--	--	--	--
	1957	2327	6595	3966	500	--	--	--	--	--	--
	1958	6529	7305	5077	350	--	--	--	--	--	--
	1959	6752	9544	5271	12176	35773	1413	--	--	--	--
	1960	5729	8955	6178	7203	8224	364	--	--	--	--
	1961	5197	8962	6321	6030	4996	224	3923	--	--	--
	1962	5869	8310	5929	5781	6482	6002	4017	4243	--	--
	1963	5397	8004	5488	6515	10015	11953	3705	1503	--	--
	1964	6031	7227	5012	6955	9497	8100	4168	1002	--	--
	1965	5735	6016	4817	6038	7748	6589	21152	4075	--	--
	1966	6127	7087	4220	5843	8476	7244	24860	8846	14876	32930
	1967	6139	6852	4144	5558	7388	6399	15591	12764	2447	15231
								10885	11894	2479	12243
Projected	1968	6731	6031	3949	5224	6590	6208	10557	11847	15454	10518
	1969	8610	6561	4406	5010	6824	5911	11174	13207	16406	12302
	1970	8202	6636	4490	4675	7038	6574	9590	13465	12354	10525
	1971	8080	7124	4784	5324	7175	5965	11401	13009	10992	9784
	1972	8292	6938	4875	5454	6664	5701	11010	13816	10390	9414
	1973	7912	6103	5114	4809	6662	5228	9889	10487	8350	9534
	1974	7666	6023	5054	4726	6414	5691	8794	10171	7790	9064

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[1] Yearly Capital Expenditures are assumed for enfollments two years hence.

The estimates are shown in Table D-1.3. The table reveals that based on historical data it is approximately half again as expensive to construct facilities for each F.T.E. student at a new college than to construct facilities for this student at a college with a present enrollment of some 14,000 students.

Assuming the life expectancy of the capital facilities of a college is forty years and that the total physical plant of the college is built at the beginning of the period it would require an average annual growth rate of at least 350 F.T.E. students over the forty-year period to obtain maximum economies in construction costs per F.T.E. student. Between the years 1960-61 through 1967-68 the average annual growth for four State Colleges was below this figure, Humboldt with 241, Dominguez Hills with 195, Sonoma with 200, and Stanislaus with 80. Three colleges, according to current projections will have a continuing annual average growth below 350 F.T.E. through 1977-78. They are: Bakersfield (259), Humboldt (243, and Stanislaus (204) State Colleges.

Operating Costs

Capital construction costs are considered "one-time" costs, whereas operating costs must be expended on a yearly and continuing basis. Should economies-of-scale with respect to both size and growth rate be noted in operating costs, then even greater economies will result when size and growth rate are increased to their maximum. Using the same methodology as was used with capital costs, similar data were derived for operating costs, using current costs as reported in the 1968-69 Governor's Budget (Table D-1.4 and 1.5 and Figure D-1.2). Again, it should be noted that although observed enrollment ranged up to a maximum of 16,446, there is no evidence when diseconomies-of-scale will ultimately result.

Figure D-1.1
Capital Costs Per FTE (8-5) Student at Various Size State Colleges

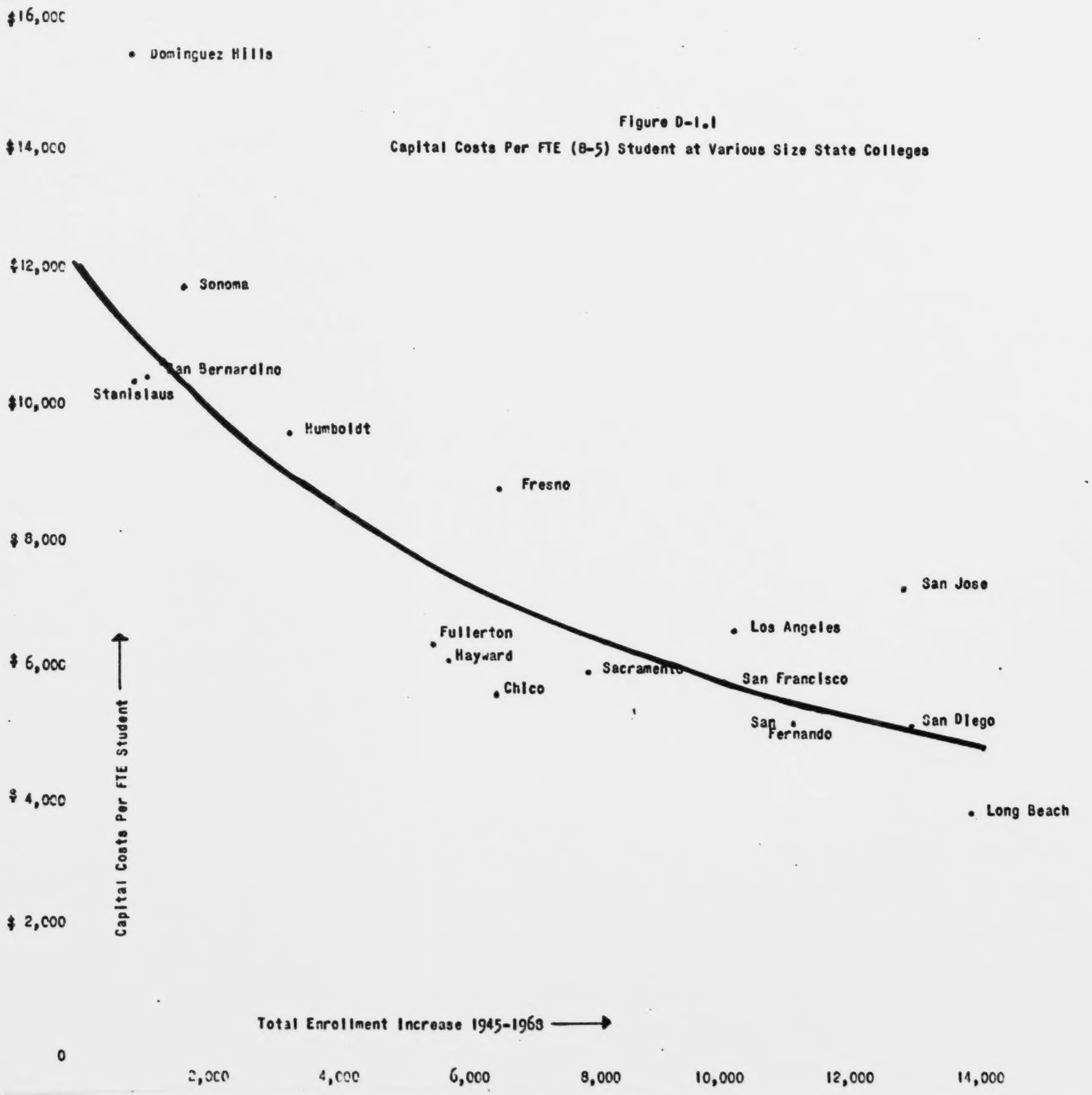


TABLE D-1.3

CALIFORNIA STATE COLLEGES
CAPITAL COSTS PER FTE (8-5) STUDENT AT VARIOUS ENROLLMENT LEVELS

Enrollment	Capital Cost	Enrollment	Capital Cost
0	$12284	7200	6898
200	12024	7400	6815
400	11774	7600	6733
600	11534	7800	6654
800	11304	8000	6577
1000	11082	8200	6502
1200	10870	8400	6428
1400	10665	8600	6356
1600	10468	8800	6285
1800	10278	9000	6216
2000	10095	9200	6149
2200	9918	9400	6083
2400	9747	9600	6018
2600	9582	9800	5955
2800	9423	10000	5893
3000	9268	10200	5832
3200	9119	10400	5772
3400	8975	10600	5714
3600	8835	10800	5657
3800	8699	11000	5601
4000	8567	11200	5546
4200	8440	11400	5493
4400	8316	11600	5440
4600	8195	11800	5388
4800	8078	12000	5337
5000	7965	12200	5287
5200	7854	12400	5238
5400	7747	12600	5190
5600	7642	12800	5143
5800	7540	13000	5097
6000	7441	13200	5052
6200	7345	13400	5007
6400	7251	13600	4963
6600	7159	13800	4920
6800	7070	14000	4877
7000	6983		

TABLE D-1.4

CALIFORNIA STATE COLLEGES
1966-67 NET OPERATING COST PER FTE STUDENT

College	Enrollment	Cost Per Student
Chico	5822	1316
Dominguez Hills	118	10087
Fresno	7618	1336
Fullerton	5273	1268
Hayward	4105	1494
Humboldt	2956	1782
Long Beach	14537	1089
Los Angeles	11476	1330
Sacramento	7556	1271
San Bernardino	514	2831
San Diego	14052	1159
San Fernando	10327	1183
San Francisco	13590	1165
San Jose	16446	1183
Sonoma	1141	2170
Stanislaus	704	2207
Kellogg-Voorhis	4847	1341
San Luis Obispo	7434	1224

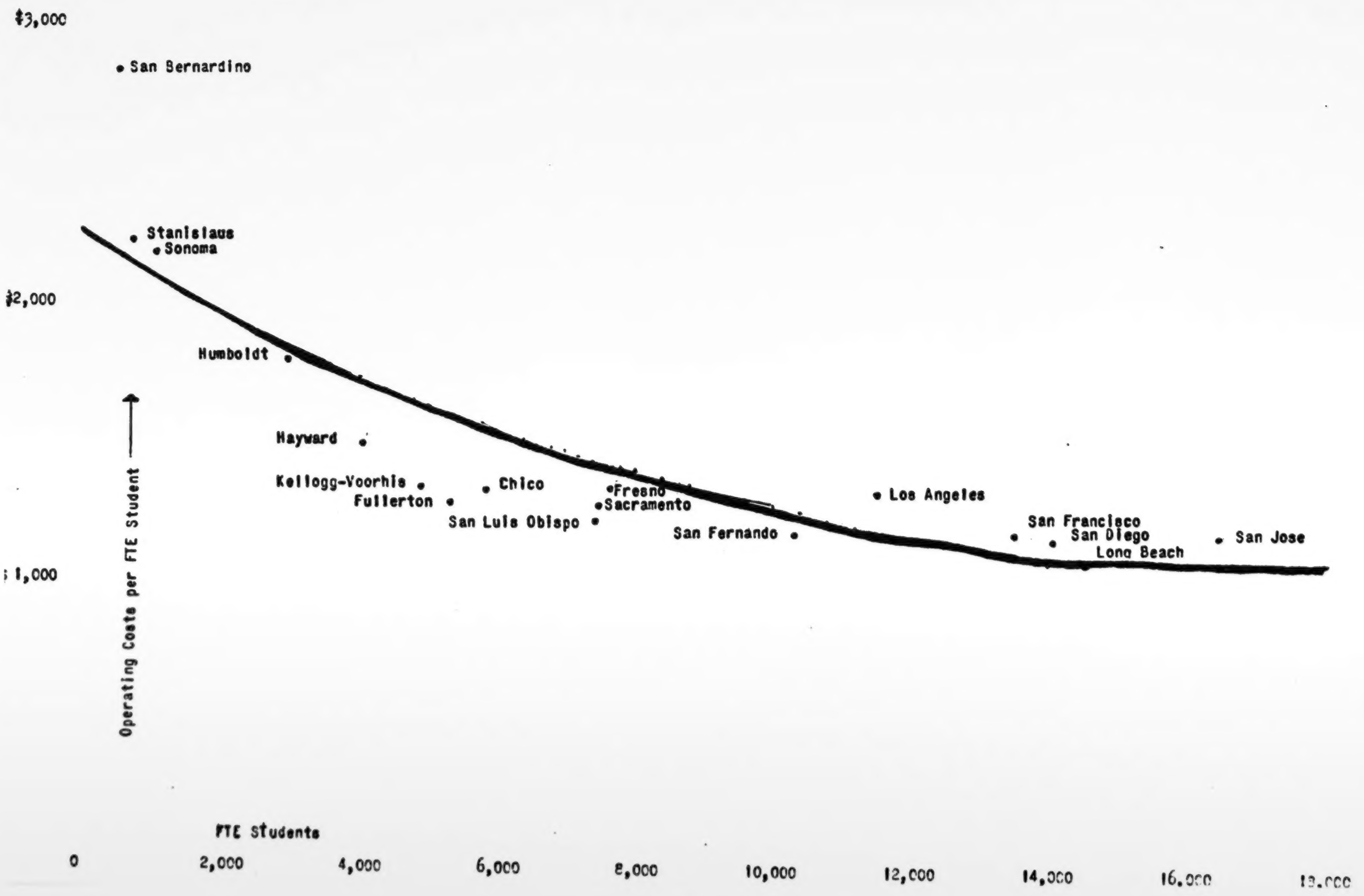
Table D-1.5

CALIFORNIA STATE COLLEGES
OPERATING COSTS PER FTE (8-5) STUDENTS AT VARIOUS ENROLLMENT LEVELS

Enrollment	Operating Cost	Enrollment	Operating Cost
0	2251	7200	1456
200	2217	7400	1442
400	2185	7600	1428
600	2153	7800	1414
800	2122	8000	1401
1000	2092	8200	1388
1200	2063	8400	1375
1400	2035	8600	1362
1600	2007	8800	1350
1800	1980	9000	1338
2000	1954	9200	1326
2200	1929	9400	1314
2400	1904	9600	1302
2600	1880	9800	1291
2800	1857	10000	1280
3000	1834	10200	1269
3200	1811	10400	1258
3400	1789	10600	1248
3600	1768	10800	1237
3800	1747	11000	1227
4000	1727	11200	1217
4200	1707	11400	1207
4400	1688	11600	1197
4600	1669	11800	1188
4800	1650	12000	1178
5000	1632	12200	1169
5200	1614	12400	1160
5400	1597	12600	1151
5600	1580	12800	1142
5800	1563	13000	1133
6000	1547	13200	1125
6200	1531	13400	1116
6400	1515	13600	1108
6600	1500	13800	1100
6800	1485	14000	1092
7000	1470		

Figure D-1.2

Operating Costs Per FTE (8-5) Student at Various Size State Colleges



APPENDIX D-2

ASPECTS OF COSTS AND BENEFITS OF ESTABLISHMENT OF NEW COLLEGES IN SELECTED AREAS[1]

1. San Mateo-Santa Clara Counties

San Mateo County is projected to have 9,500 public school twelfth grade graduates for the academic year ending in June 1980. The secondary zone consisting of Alameda, San Francisco, Santa Cruz and Santa-Clara-San Benito Counties is projected to have 51,250 twelfth grade public school graduates for the same year. Table D-2.1 shows the projected FTE fall enrollment for a college located in San Mateo County, assuming that the first students will be admitted in the fall of 1971-72. This enrollment of 6,788 compares to that which was projected in the 1964 Council report of 7,860 students for the year 1980-81. The table also shows, based upon cost data developed in Appendix D-1, the total expenditures for capital outlay and operations at this projected enrollment level. The average cost for the physical facilities provided for this projected enrollment level after ten years of operations is $7,159 per student served. Operating costs for the ten years of operations averages $1,723 per student per year. Assuming the rates of participation of San Mateo County twelfth grade public school graduates into the State College system continue at an equivalent rate as observed for 1967, of the same 6,788 students projected for a new college in San Mateo, approximately 5,935 would have been in attendance at other State Colleges even if the new facility in San Mateo were not built.

TABLE D-2.1

ESTIMATED TOTAL ANNUAL FTE ENROLLMENT
FOR A POSSIBLE NEW STATE COLLEGE IN SAN MATEO COUNTY
ASSUMING FIRST STUDENTS TO BE ADMITTED IN THE FALL OF 1971

Year	Total Annual FTE Enrollment	Yearly Growth	Projected Costs	
			Capital	Operating
1971-72	189	189	$ -	$ 425,439
1972-73	447	258	-	976,695
1973-74	800	353	-	1,697,600
1974-75	1,241	441	-	2,560,183
1975-76	1,853	612	-	3,668,940
1976-77	2,521	668	-	4,799,984
1977-78	3,306	785	-	5,987,166
1978-79	4,304	998	-	7,346,928
1979-80	5,454	1,150	-	8,710,038
1980-81	6,788	1,334	48,595,292	10,182,000
	Total 26,903	Total	$48,595,292	$46,354,973
Average Cost per Student at end of 10 years of Operations			$ 7,159	$ 1,723

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[1] General areas studied by the Council in 1964. Projections herein are to 1980-81 in contrast to Chapter IV of the report. The 1980-81 terminal date is used to supplement data found in Appendix D-3 following and for the reasons there stated.

Therefore, the new college in San Mateo generates increased participation of only 853 students by the tenth year of operation. If these 5,935 students who would have attended elsewhere in the State College system were provided space at existing colleges, and these colleges had an enrollment of at least 14,000 students, then the following savings could result:

	Cost Per Student	
	Capital	Operating
1. At new State College in County	$7,159	$1,500
2. At established State College with 14,000 enrollment	-4,877	-1,092
3. Savings per student at established State College	$2,282	$ 408

Multiplying these costs by the 5,935 students projected which would have been served elsewhere in the system, the alternative of providing a new college in San Mateo County could cost $13,543,670 more for capital facilities and have an operating cost level of $2,421,480 per year more expensive than if space were provided for these same students at existing State Colleges.

2. Alameda - Contra Costa Counties

A State College in Contra Costa County with a secondary enrollment zone consisting of Alameda, San Francisco, Marin, San Joaquin and Solano Counties, is projected to generate an enrollment of 6,385 students after ten years of operations. This compares to the projection of 7,700 students made in 1964. Table D-2.2 shows the projected average yearly growth of such a college. Capital costs per student are estimated to be $7,345 and operating costs average $1,744 for the ten year period. These costs per

TABLE D-2.2

ESTIMATED TOTAL ANNUAL FTE ENROLLMENT
FOR A POSSIBLE NEW STATE COLLEGE IN CONTRA COSTA COUNTY
ASSUMING FIRST STUDENTS TO BE ADMITTED IN THE FALL OF 1971

Year	Total Annual FTE Enrollment	Yearly Growth		Projected Costs	
				Capital	Operating
1971-72	217	217		$ -	$ 481,089
1972-73	490	273		-	1,070,650
1973-74	849	359		-	1,801,578
1974-75	1,289	440		-	2,659,207
1975-76	1,859	570		-	3,680,820
1976-77	2,490	631		-	4,740,960
1977-78	3,234	744		-	5,856,774
1978-79	4,161	927		-	7,186,047
1979-80	5,211	1,050		-	8,410,554
1980-81	6,385	1,174		46,897,825	9,775,435
Total	26,185		Total	$46,897,825	$45,663,114
Average Cost per Student at end of 10 years of operations:				$ 7,345	$ 1,744

student would equate to an additional $17,069,094 in operations and $15,758,180 in capital outlay over that which could be expected should these same students be served on a campus which had the maximum observed economies of scale. Of the 6,385 students projected for the tenth year, only 1,041 students would be new to the system assuming that the college-going rate remained as was observed for the area in the fall of 1967.

3. Ventura County

In 1964, a State College in Ventura was projected to reach an enrollment of 6,910 after ten years of operations. The current projection, with Santa Barbara County as its secondary zone, shows an enrollment of only 4,532 students at the end of ten years of operations--and of this enrollment 3,175 students would have attended a State College regardless, assuming the college-going rate observed for 1967 continues into the future. Inefficiencies due to projected size of such a campus would cause added capital costs totaling $10,918,825 just for those students redirected to the campus who would have attended another State College regardless of whether this campus was built or not. For these same students, an additional $1,892,300 annually would be necessary in operating costs over what the cost would be should these same students have been educated at a campus enjoying the maximum of observed economies. Table D-2.3 shows the enrollment and projected costs for such a campus.

TABLE D-2.3

ESTIMATED TOTAL ANNUAL FTE ENROLLMENTS
FOR A POSSIBLE NEW STATE COLLEGE IN VENTURA COUNTY
ASSUMING FIRST STUDENTS TO BE ADMITTED IN THE FALL OF 1971

Year	Total Annual FTE Enrollment	Yearly Growth		Projected Costs	
				Capital	Operating
1971-72	138	138		$ -	$ 310,638
1972-73	317	179		-	702,789
1973-74	533	216		-	1,164,605
1974-75	826	293		-	1,752,772
1975-76	1,213	387		-	2,502,419
1976-77	1,666	453		-	3,343,662
1977-78	2,189	523		-	4,257,605
1978-79	2,836	647		-	5,266,452
1979-80	3,609	773		-	6,380,712
1980-81	4,532	923		37,688,112	7,650,016
Total	17,859		Total	$37,688,112	$33,331,670
Average Cost per Student after 10 years of operations:				$ 8,316	$ 1,866

4. Los Angeles County (Glendale)

The 1964 report projected an enrollment of 8,300 students after ten years of operations with the location of a college in the Glendale area. The current projection indicates an enrollment of 6,747, and only 1,209 students would be new to the system. Table D-2.4 shows the projected yearly growth of a college located in this area. The table shows the per student costs for both capital and operations. These costs are $2,282 and $618 per student more, respectively, than if these same students were served at a campus showing maximum economies.

TABLE D-2.4

ESTIMATED TOTAL ANNUAL FTE ENROLLMENTS
FOR A POSSIBLE NEW STATE COLLEGE IN LOS ANGELES COUNTY (GLENDALE AREA)
ASSUMING FIRST STUDENTS TO BE ADMITTED IN THE FALL OF 1971

	Total Annual FTE Enrollment	Yearly Growth	Projected Costs	
Year			Capital	Operating
1971-72	168	168	$ -	$ 378,168
1972-73	417	249	-	535,845
1973-74	784	367	-	1,687,952
1974-75	1,238	454	-	2,553,994
1975-76	1,883	645	-	3,728,340
1976-77	2,574	691	-	4,900,896
1977-78	3,353	779	-	6,072,283
1978-79	4,389	1,036	-	7,492,023
1979-80	5,468	1,079	-	8,732,396
1980-81	6,747	1,279	48,301,773	10,120,500
Total	27,021	Total	$48,301,773	$46,202,397
Average Cost per Student after 10 years of operations:			$ 7,159	$ 1,710

The four areas analyzed above for the possible establishment of new State Colleges had a total projected enrollment of 24,452 students after 10 years of operations. However, it is projected that 19,992 of these students would be expected to attend a State College within the system even if these four new colleges were not established. To serve these 4,460 additionally generated students, an additional $62,230,598 in capital outlay and $64,571,098 in operating expenditures would be necessary over that which would be necessary should these same students be served at campuses offering maximum observed economies. The decision to establish new campuses rather than to increase the size of presently established campuses is even more expensive when one considers that this decision also limits the potential growth of existing colleges which might presently be inefficient in cost due to their current size.

APPENDIX D-3

PROJECTIONS OF THE NEED FOR ADDITIONAL STATE COLLEGES THROUGH THE YEAR 1980-81

In Chapter IV the need for additional State Colleges was analyzed through the year 1977-78. As was noted in the text, the analysis was limited to this time period for two reasons: first, the Department of Finance official projections are presently available only through the year 1977-78 and secondly, allowing for five years lead time to establish new campuses, the re-evaluation of need by the Council in 1972, barring presently unforeseen contingencies, would allow for the establishment of new campus facilities to begin operations in 1977-78 should the 1972 study indicate such a need for new facilities.

However, four additional colleges in addition to the five already analyzed, are expected to be close to their present enrollment ceilings in 1977-78. (See Table IV-2). For this reason, the Council staff has extended the official projections through the year 1980-81 on the basis of projected high school graduates, participation rates of high school graduates into the State College system, and the observed and projected growth rate of each State College. The results of this extended projected student demand and the resultant effects upon the State College system follows. This material is presented to provide additional depth and perspective to the report's findings which are based on the 1977-78 terminal date.

Planned Enrollment Ceilings

The enrollment ceiling currently established for each of the State Colleges for the regular academic year and the projected annualized summer quarter enrollments for the year 1980-81 are shown in Table D-3.1 and D-3.2.

TABLE D-3.1

PROJECTED ANNUAL FULL-TIME EQUIVALENT STUDENT DEMAND,
8 A.M. - 5 P.M. (INCLUDING SUMMER QUARTER INDREMENTS)
CALIFORNIA STATE COLLEGES, 1978-79 TO 1980-81

College	1978-79	1979-80	1980-81
Bakersfield	2,710	3,090	3,470
Chico	12,125	12,665	13,215
Dominguez Hills	8,680	9,500	10,320
Fresno	13,270	13,800	14,330
Fullerton	14,810	15,700	16,590
Hayward	16,970	18,060	19,145
Humboldt	6,710	6,985	7,265
Kellogg-Voorhis	10,560	11,030	11,500
Long Beach	19,990	20,560	21,130
Los Angeles	19,720	20,430	21,205
Sacramento	15,920	16,770	17,620
San Bernardino	6,470	7,050	7,630
San Diego	26,415	27,605	28,800
San Fernando Valley	21,360	22,295	23,235
San Francisco	19,215	19,610	20,015
San Jose	23,060	23,660	24,265
San Luis Obispo	13,955	14,435	14,920
Sonoma	5,740	6,140	6,540
Stanislaus	3,130	3,390	3,650
Less Those Redirected to Other Colleges[a]	1,655	2,035	2,440
	259,155	270,740	282,405

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[a] See explanation, Table IV-1

TABLE D-3.2

CURRENTLY PLANNED ENROLLMENT CEILINGS AT THE CALIFORNIA STATE COLLEGES FOR THE YEAR 1980-81

College	Enrollment Ceiling Regular Academic Year [a]	Summer Quarter Increment[b]	Currently Planned Enrollments[c]
Bakersfield	12,000	310	12,310
Chico	10,000	800	10,800
Dominguez Hills	20,000	930	20,930
Fresno	20,000	880	20,880
Fullerton	20,000	1,290	21,290
Hayward	15,000	1,920	16,920
Humboldt	5,000	540	5,540
Kellogg-Voorhis	20,000	1,100	21,100
Long Beach	20,000	1,500	21,500
Los Angeles	16,800	3,200	20,000
Sacramento	20,000	2,450	22,450
San Bernardino	20,000	620	20,620
San Diego	20,000	1,840	21,840
San Fernando Valley	20,000	1,130	21,130
San Francisco	16,000	3,140	19,140
San Jose	17,000	3,390	20,390
San Luis Obispo	12,000	980	12,980
Sonoma	12,000	220	12,220
Stanislaus	12,000	140	12,140
Total	307,800	26,380	334,180

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[a] Annual average full-time equivalents (8 A.M. - 5 P.M.)

[b] Summer Quarter FTE converted to annual average FTE students. This summer quarter FTE count are those students who would have enrolled during the regular academic year prior to inauguration of Year-Round operations.

[c] Regular academic year plus summer quarter increment.

Enrollment Demand Versus Currently Planned Enrollment Ceilings

A comparison of the 1980-81 enrollment demand projected for the California State Colleges--282,405--and the currently planned enrollment ceilings--334,180 (including the summer quarter increment)--shows that for all State Colleges combined, the planned capacity in the existing State Colleges exceeds the enrollment demand by more than 50,000. Individual college projections in Table D-3.1, however, indicate that prior to 1980-81, four additional State Colleges, in addition to those projected to top-out prior to 1977, will exceed their current enrollment ceilings. These four colleges and the year in which they are projected to top-out are shown below:

TABLE D-3.3

ENROLLMENT DEMAND VERSUS CURRENTLY PLANNED ENROLLMENT CEILINGS

College	Projected Student Demand[a]	Current Planned Enrollment Ceiling[b]	Top-Out Year
Hayward	19,145	16,920	1978-79
Los Angeles	21,205	20,000	1978-79
San Fernando Valley	23,235	21,130	1978-79
San Francisco	20,015	19,140	1978-79

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[a] From Table D-3.1

[b] From Table D-3.2

As a result of these additional four campuses and those five projected to top-out prior to 1977-78, there is projected to be an unallocated enrollment of some 21,000 FTE students in 1980-81 that will have to be accommodated in some way by the State College system.

Accommodation of Enrollments Greater Than Planned Ceilings

It is evident that the maximum planned enrollment capacity of the State College system as a whole is more than sufficient to care for the enrollment projected for 1980-81. This would, however, require ability to redirect all students, if need be, from colleges without additional capacity to those where capacity can be provided without regard to the location of college or student. Since such complete redirection is unlikely, an examination of individual State Colleges within major geographic areas of the State is required to see if regional problems can be identified. Again, the same proposed options discussed in Chapter IV will be applied to each geographic region to determine whether the projected excess student demand can be accommodated in the existing planned facilities. These options are: (1) redirection, (2) year-round operations, (3) greater utilization of facilities during the night time hours and also on Saturdays, (4) higher planned enrollment ceilings at topped-out campuses and (5) the authorization of new State Colleges.

SAN FRANCISCO BAY REGION

As shown in Table D-3.1 all State Colleges in the San Francisco Bay region, except Sonoma, have projected enrollments well above planned enrollment ceilings. As a result, some 6,075 FTE students could be without accommodations in 1980-81 based on present estimates. The provision of enrollment capacity to house these students through the implementation of one or more of the policy options discussed above is considered below.

Year-Round Operation. San Francisco State College is projected to exceed its current enrollment ceiling by 1978-79. To accommodate through year-round operation the 20,015 enrollment (including the summer quarter increment) projected for 1980-81, the summer quarter enrollment would have to be increased from the presently planned level of 59% to at least 75% of the fall term enrollment.

California State College at Hayward is projected to exceed its current enrollment ceiling also in 1978-79 and to accommodate the 19,145 FTE students projected for 1980-81 at this institution by means of year-round operation the summer term enrollment would need to be increased from the currently projected level of 38% to a level approximating 83% of the fall term enrollment.

As was mentioned in Chapter IV, San Jose State College is projected to surpass its current enrollment ceiling by 1971-72 and as shown in Table D-3.1 would have a total enrollment demand (including the projected summer quarter increment) of 24,265 in 1980-81. This enrollment could not be entirely accommodated through year-round operation even with 100% balanced enrollment.

In summary, therefore, it is apparent that the initiation of year-round operation alone could not provide for the accommodation of 1980-81 total excess enrollments generated in the San Francisco Bay area in the decade ahead resulting from the topping-out of the State Colleges at San Francisco, San Jose, and Hayward.

Redirection. The principal counties from which the State Colleges at San Francisco, San Jose and Hayward draw their enrollments are shown in Table D-3.4 along with the percentage of each college's total fall term, 1967, enrollment coming from each county.

TABLE D-3.4

COUNTY PARTICIPATION RATES AT THE CALIFORNIA STATE COLLEGES
AT SAN FRANCISCO, SAN JOSE AND HAYWARD
(FALL TERM, 1967)

	Percent of Total Enrollment Coming From County		
County	Hayward	San Francisco	San Jose
Alameda	73%	14%	8%
San Diego	--	1	1
San Francisco	2	36	2
San Mateo	2	14	9
Santa Clara	2	3	54
Los Angeles	1	6	6
Conta Costa	14	7	3
Other Bay Area Counties	2	10	6
All Other Counties	4	9	11

The table shows that only 5% of the 1967 fall term enrollment at the State College at Hayward comes from counties outside the San Francisco Bay area. If the same participation rates occurred in 1980-81, and if students from counties outside the Bay area were redirected to other colleges, the 2,225 FTE student excess enrollment at Hayward could be reduced by some 957 students.

The situation with respect to redirection is somewhat different at San Jose and San Francisco State Colleges than at Hayward. Fifteen percent of the total 1967 fall term enrollment at San Francisco and 17% at San Jose State came from counties outside the San Francisco Bay region. If the same participation rates persisted to 1980, the redirection of such percentages of students (less the 1% at each college whose home residence is San Diego County) in 1980-81 would provide excess capacity over and above the projected total student demand for some 2,127 FTE students at San Francisco and for some 250 FTE students at San Jose. Together, these three Bay Area colleges would retain excess capacity over and above projected total demand for some 1,100 students through the year 1980-81 assuming total redirection of those students whose residence was outside the San Francisco Area.

Extension of Instruction to Evenings and Saturdays. Table D-3.5 shows the utilization of facilities during the evening hours in the fall term of 1966 for the three San Francisco Bay Area colleges and the projected use during these and Saturday hours in 1980 required to accommodate the projected excess enrollment. In order to meet the total student demand projected for 1980-81 these rates would have to be increased from 22.8% to 58.2% at San Jose, from the current 15.3% to 38.3% at Hayward and at San Francisco State College from 22.2% to 30.7%. Should maximum utilization be made of the total hours available during the evenings and Saturday morning, these three State Colleges combined would retain a capacity for approximately 15,000 FTE students over and above the projected total student demand projected for the year 1980-81.

TABLE D-3.5

EVENING AND SATURDAY USE OF FACILITIES
ACTUAL FALL 1966 AND PROJECTED TO 1980

College	% Evening Use (5 pm-10 pm) Fall 1966	Current Ceiling[a] Adjusted For Maximum Extended Day Use	1980-81 Projected[b] Enrollment Demand	1980-81 Surplus (Deficit) Enrollment Capacity	1980-81 % Extended Day Use To Meet Enrollment Demand
San Jose	22.8%	27,948	24,265	3,683	58.2%
Hayward	15.3	24,660	19,145	5,515	38.3
San Francisco	22.2	26,304	20,015	6,289	30.7

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[a] 29/45 added to the current ceiling.

[b] Including the projected summer quarter increment.

Increasing the Enrollment Ceilings and Adding Facilities. As noted in Chapter IV one of the factors in the determination of an enrollment ceiling for a college are the limitations imposed by the college site. The current enrollment ceiling of 15,000 for California State College at Hayward has resulted not from limitations imposed by the acreage of the college site but by traffic and access problems. As soon as these problems are resolved, the physical dimensions of the site could permit an increase in the enrollment ceiling to 20,000 FTE students or more.

The present campus site at San Francisco State consists of 100 acres situated on a gentle to steep slope. No contiguous land is available to expand the geographical dimensions of the campus, and there is no possibility of adding additional floors to existing buildings to add to the physical dimensions of the campus. Land is available for a separate nearby sub-campus. It should be noted, however, that the potential economies-of-scale derived by increasing the size of a campus will not exist if a sub-campus cannot share the service facilities of the parent campus. It is evident that under present conditions there is little possibility for increasing the planned enrollment ceiling on the San Francisco campus beyond the current limit of 16,000 FTE students during the regular academic year.

The present campus site at San Jose State College consists of 131 acres of level terrain. An additional seven acres is available to meet the current enrollment ceiling. Additional land adjacent to the campus could be available for increasing the present enrollment capacity. However, it is currently commercial and residential property. As was noted in Chapter IV, the economies of increasing scale may be offset by the cost of site development.

The Addition of New Colleges. The 1964 Council study found that a "definite ultimate need" existed for two new State Colleges in the San Francisco Bay area--one in Contra Costa County and the other in the San Mateo-Santa Clara County area--and that authorization for the establishment of one of these could be recommended by 1969. Advance site acquisition was subsequently recommended and has gone forward in both areas.

The above discussion of the San Francisco Bay area would indicate that although a "definite ultimate need" for additional State Colleges continues to exist in this area, the actual opening of the colleges need not be prior to 1980-81 if the enrollment at the four existing colleges in the area is limited to students residing in the area. The immediate initiation of year-round operation at those colleges where a cost-benefit analysis indicates its desirability, the redirection of students to Sonoma State College or elsewhere and an increase in the enrollment ceiling at Hayward could provide further capacity for the accommodation of enrollments now projected beyond currently planned ceilings. Further, a greater utilization of facilities during the evening and Saturday morning hours could relieve the projected total excess student demand through the year 1980-81.

An examination of the effect of establishing a new State College in San Mateo-Santa Clara County[1] in the near future indicates that the college could expect an enrollment of 6,788 in 1980-81 (somewhat less than the 7,860 projected in the 1964 Council study). (Approximately 6,000 of these students would have been in attendance at other State Colleges even if the new facility had not opened.) The findings of Appendix D-1 would indicate that the accommodation of these students in existing colleges would result in total lower costs to the State than if they were accommodated in a new college. Similar findings are indicated for a proposed college in the Contra Costa County.[2]

LOS ANGELES AREA

Only two of the seven State Colleges in the Los Angeles area are projected to exceed their currently planned enrollment ceilings by 1980-81. (See Table D-3.2). The two colleges, Los Angeles and San Fernando would together have some 3,300 more students than their total planned enrollment ceilings. The ultimate planned enrollments of the five remaining colleges, however, is approximately 40,000 greater than their projected 1980-81 enrollments.

The accommodation of the excess enrollments projected for the two colleges in the Los Angeles area through one or more of the policy options discussed previously is considered below.

Year-Round Operation. California State College at Los Angeles is expected to surpass its current enrollment ceiling by 1978-79. By 1980-81, excess student demand is projected to be 1,205 FTE students over the current planned enrollment ceiling. Now on year-round operations, the college projects its summer term enrollment to reach a level of approximately 57% of the current enrollment ceiling by 1980-81. Summer quarter enrollment would have to reach a level of approximately 79% of the regular academic year to avoid exceeding the current ceiling prior to 1980-81.

San Fernando Valley State College is projected to reach its present enrollment ceiling by 1978-79. Excess demand is projected to be 2,105 by 1980-81. Summer quarter enrollment is currently projected to be at a rate of approximately 17% of the regular academic year ceiling by 1980-81. By increasing summer quarter enrollment to approximately 31% of the average academic year enrollment, San Fernando State would not surpass its current ceiling until after 1980-81.

Redirection. As shown below in Table D-3.6, only one percent of the total student body at Los Angeles and only two percent of the enrollment at San Fernando Valley State College are residents of counties outside of southern California. It is evident that if these participation rates persist, the excess enrollment projected for the two colleges in 1980-81 could be accommodated by redirection to other colleges in the Los Angeles area where enrollment ceilings will not have been reached.

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[1] See Appendix D-2

[2] Op. cit.

TABLE D-3.6

COUNTY PARTICIPATION RATES AT LOS ANGELES AND SAN FERNANDO VALLEY STATE COLLEGES (FALL TERM, 1967)

County	Percent of Total Enrollment Coming From County Los Angeles State	 San Fernando Valley
Los Angeles	94	94
Ventura	--*	4
San Bernardino	2	--*
Other So. Calif. Counties	3	1
All Other Counties	1	2

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* Less than 1%

Extension of Instruction to Evenings and Saturday. Table D-3.7 shows the utilization of facilities during the evening hours in the fall term of 1966 for Los Angeles and San Fernando Valley State Colleges and the projected use during these times which would be required in 1980-81 to accommodate the projected excess student demand.

TABLE D-3.7

EVENING AND SATURDAY USE OF FACILITIES ACTUAL FALL 1966 AND PROJECTED TO 1980

College	% Evening Use (5 PM-10 PM) Fall 1966	Current Ceiling Adjusted For Maximum Extended Day Use[1]	1980-81 Projected Enrollment Demand[2]	1980-81 Surplus Enrollment Capacity	1980-81 % Extended Day Use To Meet Enrollment Demand
Los Angeles	41.4%	27,619	21,205	6,414	52.5%
San Fernando Valley State Colleges	23.1%	32,880	23,235	9,645	39.4%

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[1] 29/45 added to the current ceiling.

[2] Including the projected summer quarter increment.

In order to meet the total student demand projected for 1980-81, California State College at Los Angeles would have to increase its use of evening and Saturday hours from the 41.4% in 1966 to 52.5% and San Fernando Valley State College would have to increase the percentage from 23.1% to 39.4%. Should maximum utilization be made of the total hours available during the evening and Saturday hours, these two colleges combined could accommodate an enrollment of approximately 16,095 F.T.E. students over and above the projected total student demand projected for 1980-81.

Increasing Enrollment Ceilings. California State College at Los Angeles is located in an area of mesas and canyons consisting of 146 acres, with an additional 12 acres available to meet the current enrollment ceiling. Additional contiguous land is available; however, the present campus is located in a built-up area of commercial and residential development. The 1964 survey indicated that Los Angeles State's existing site could accommodate an enrollment of 20,000 students. Severe traffic and access problems have limited potential enrollment to this ceiling. Traffic and access problems might be resolved and the ceiling raised by providing parking facilities at the base of the campus on or near the present right-of-way of the Long Beach Freeway with provisions for shuttle service to the hilltop campus site.

The campus site of San Fernando Valley State College is composed of 344 acres with an additional 10 acres available to meet the current maximum planned enrollment ceiling. Additional open land is available adjacent to the present campus.

The Addition of New Colleges. It seems evident that the excess enrollment projected for the San Fernando Valley and Los Angeles State Colleges in 1980-81 can be accommodated through the implementation of some combination of year-round operations at the two colleges, redirection to other colleges in the area where ceilings have not been reached, greater use of facilities in evening and Saturday hours, and an increase in the planned enrollment ceilings.

The 1964 survey found that a State College in Ventura County to serve students from the cities of Ventura and Oxnard, as well as cities in northern Los Angeles County, would be ultimately needed. Advanced acquisition of a site in anticipation of the need later went forward. In 1964, a State College in Ventura was projected to reach an enrollment of 6,910 after ten years of operations. The current projection, with Santa Barbara County as a secondary zone, shows an enrollment of only 4,532 students at the end of ten years of operation -- and of this enrollment, 3,175 students would have attended a State College regardless, assuming the college-going rate for the area observed for 1967 continues into the future. Inefficiencies due to the projected size would result in greater capital and operational expenditures than if the students were accommodated at a campus enjoying a maximum of observed economies.[1] It would appear that the construction of a new State College in Ventura County need not go forward at this time.

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[1] See Appendix D-1.

SAN DIEGO AREA

The single State College in the San Diego area, San Diego State, has a 1980-81 projected enrollment almost 7,000 F.T.E. students greater than the institution's currently planned enrollment ceiling (see Tables D-3.1 and D-3.2). The accommodation of this excess projected enrollment with respect to the options available to the State College system is considered below.

Year-Round Operation. San Diego State College is projected to exceed its current enrollment ceiling in 1973-74, and by 1980-81 would have the largest potential excess student demand of any other State College -- 6,960 F.T.E. students. Even with this large projected excess demand, San Diego is not planning to inaugurate year-round operations until two years after the current maximum planned enrollment ceiling is projected to be exceeded. By 1980-81, summer quarter enrollment of those students who would have formerly enrolled during the regular academic year is projected to be at a rate of 27% of the ceiling. If this rate were at least equivalent to the rate projected for Los Angeles State (57%), the present ceiling would not be passed until the year 1977-78, and the excess student demand in 1980-81 could be reduced to 3,160 F.T.E. students.

Redirection. County participation rates for 1967 for San Diego State College show that while 80% of the enrollment resided in the San Diego area, a little over 15% of the 1967 enrollment had residence in the Los Angeles area, 2% had residence in the San Francisco Bay area, and 3% had residence elsewhere in the State.

Since the Los Angeles area will have planned enrollment capacity in 1980-81 well beyond projected enrollments, it would appear that the excess enrollment projected for San Diego State for 1980-81 could potentially be redirected to, and accommodated in, the Los Angeles area. If the 1967 participation rates persist, some 4,300 of the 1980-81 enrollment would be residents of the Los Angeles area.

Extension of Instruction to Evenings and Saturdays. San Diego State College during the fall of 1966 was utilizing its facilities during the nightime hours (5 PM - 10 PM) at a rate of 19.3% of the total possible hours available. To meet the projected excess student demand of 6,960 F.T.E. in 1980-81, the utilization of facilities during the evening and Saturday hours would require an increase from the present rate of 19.3% to a rate of approximately 73%. Assuming maximum utilization of facilities during the evening and Saturday hours, total projected excess student demand for the year 1980-81 could be met and capacity would still remain for an additional 4,080 F.T.E. students even without increasing the currently planned enrollment ceiling.

Increasing Enrollment Ceiling. The present campus comprises 268 acres in an area of mesas and canyons. An additional ten acres is available to meet the current enrollment ceiling, with additional acreage available to expand. Access and traffic problems could limit this expansion.

The Addition of New Colleges. The initiation of year-round operation at an earlier date than is presently planned; the redirection of students to areas where enrollment capacity will exist; and the greater utilization of facilities during evening and Saturday hours can potentially accommodate the enrollment projected for San Diego State through 1980-81. Further, since 1980-81 projected enrollment for San Diego are status quo projections, the affect the University of California at San Diego has upon these projections is currently unknown. In addition, the possibility of an increase in the planned enrollment ceiling exists and should be considered.

OTHER AREAS

State Colleges in three other areas of the state have projected enrollments for 1980-81 that exceed their planned enrollment ceilings. The accommodation of the surplus enrollments generated in each of these colleges is discussed below with respect to the options available to the State College system to provide housing for these students.

Humboldt Area. The planned enrollment ceiling at Humboldt State College will be exceeded by 1974-75 according to the projections for the college, and by 1980-81 the projected excess student demand would approach some 1,725 above the ceiling.

Year-round operation, with a summer term enrollment equal to 50% of the fall term enrollment, would postpone the year in which the enrollment ceiling is reached and would reduce the surplus enrollment in 1980-81 to some 1,000 students. Since 10% of the enrollment at Humboldt State has residence in the Los Angeles area where ceilings will not be reached by 1980, redirection of these students to colleges in the Los Angeles area would tend to further reduce the student demand at Humboldt. Further, an additional 15% of the students at Humboldt have residence in areas where State College facilities will be available in 1980-81.

An increase in the enrollment ceiling to meet the projected student demand appears most feasible since the campus acreage is sufficient for the present enrollment ceiling and additional land is available to expand the site. An increased enrollment ceiling would also result in savings due to economies-of-scale.

Increasing the utilization of facilities during the evening and Saturday hours would also be an option toward meeting the projected excess student demand. In the fall of 1966, Humboldt used the evening hours (5 PM - 10 PM) only to the extent of 3.8% of the total hours available. By utilizing these hours and also those available during Saturday morning, Humboldt could meet the total projected excess student demand by increasing the present rate from 3.8% to approximately 57%. Should these "extended use hours" be fully utilized, and assuming no increase in the current enrollment ceiling, Humboldt could meet total projected excess student demand and still retain capacity for an additional 955 F.T.E. students through the year 1980-81.

It would appear that by the initiation, or greater potential use, of one or combination of the options of year-round operations, redirection, extension of evening and Saturday use of facilities and/or an increase in the current enrollment ceiling will be sufficient to accommodate the enrollment projected for Humboldt State and will result in a more economical and efficient college.

San Luis Obispo Area. California State Polytechnic College at San Luis Obispo's current enrollment ceiling is projected to be exceeded by 1976-77. In 1980-81 the excess enrollment projected for the college will be 1,940 students. The enrollment projection anticipates the initiation of year-round operations, but with an enrollment balance of only 25%. Assuming a balance of 50%, enrollments could be met and the current enrollment ceiling would not be exceeded until 1979-80.

The option of increasing the use of facilities during the evening and Saturday morning hours would also meet the projected excess student demand through the year 1980-81. During the fall of 1966, Cal Poly at San Luis Obispo used the evening hours at a rate of only 3.1% of the total hours available. By increasing the present rate to 28.2%, Cal Poly could meet the projected excess student demand in 1980-81. Full utilization of this option would not only meet projected student demand, assuming retention of the current enrollment ceiling, but also provide capacity for an additional 4,800 F.T.E. students through the year 1980-81.

The State College has an existing campus site of 374 acres, excluding agricultural lands, which is sufficient to expand the present enrollment ceiling by at least 50%.

It is apparent that the excess enrollment projected for the college will be, in part, accommodated through a better balanced year-round operation. The greater utilization of facilities during the nightime and Saturday hours could also handle the total projected student demand. And further, even without implementing the above options, the enrollment ceiling at San Luis Obispo can be easily increased to accommodate the projected excess student demand.

Chico Area. Chico State College is expected to meet its current enrollment ceiling in 1975-76. The excess enrollment projected for the college will total 2,415 students in 1980-81. Summer quarter enrollment of those students who would have previously enrolled during the regular academic year is projected to be approximately 24% of the current enrollment ceiling by the year 1980-81. A balanced enrollment during the summer quarter at a rate of 50% of the regular academic year would postpone the year when the current enrollment ceiling would be surpassed to 1978-79.

The extension of evening and Saturday use of facilities from the rate of 13.9% observed in the fall of 1966 to a rate of approximately 51% by 1980-81 would meet total projected excess student demand.

The present site consists of 116 acres with an additional 40 acres available to meet the present enrollment ceiling. Adjacent land is available. However, the college site is located in a highly built-up area of commercial and residential development and access and traffic congestion could limit possible expansion. One of the existing instructional facilities could be expanded from two to four floors.

In 1967, 23% of the enrollment at Chico had residence in the county (Butte) in which Chico is located, and a somewhat higher percentage, 25%, had residence in counties in the San Francisco Bay area. The remaining 50% are largely residents of counties in areas of the state where State College enrollment ceilings will not be exceeded in 1980-81. The use of the option of redirection would therefore seem possible to relieve the surplus enrollments projected for Chico in 1980-81.

In summary, it is apparent that the excess enrollment projected for Chico State College in 1980-81 can easily be accommodated through the implementation of one or a combination of the options of year-round operation, redirection, extended use of facilities during the evening and Saturday hours, and an increase in the current enrollment ceiling.

APPENDIX E

SUPPORTING MATERIAL CONCERNING UNIVERSITY OF CALIFORNIA

APPENDIX E-1

UNIVERSITY OF CALIFORNIA
FALL, FULL-TIME ENROLLMENTS COMPARED TO ALL PUBLIC HIGHER EDUCATION ENROLLMENTS
1948-1968

Year	Total Enrollment in Public Institutions	University of California Enrollment	University Proportion of Public Enrollment
1948	122,189	43,469	35.58%
1949	136,115	43,426	31.90
1950	121,485	39,492	32.51
1951	107,717	34,883	32.38
1952	111,306	33,326	29.94
1953	109,490	32,636	29.81
1954	125,069	32,563	26.04
1955	141,792	37,717	26.60
1956	149,942	37,522	25.02
1957	164,020	41,625	25.38
1958	178,791	43,101	24.11
1959	181,777	44,476	24.47
1960	203,940	46,863	22.98
1961	229,003	51,340	22.42
1962	248,560	55,775	22.44
1963	269,520	61,111	22.67
1964	311,925	67,070	21.50
1965	363,202	75,743	20.85
1966	380,994	82,585	21.68
1967	427,702	91,780	21.46

Source: 1948-1958, *Master Plan for Higher Education in California 1960-1975*, p. 46; 1953-1968, State Department of Finance, Reports of Total and Full-Time Enrollments in California Institutions of Higher Education.

APPENDIX E-2

UNIVERSITY OF CALIFORNIA
ACTUAL AND PROJECTED FALL TERM, UNDERGRADUATE ENROLLMENTS BY LEVEL[a]
1960-1977

Fall	Freshman	Sophomore	Lower Division	Junior	Senior	Upper Division	Total Undergraduate	Graduate	Total Enrollment
1960	9,215	7,371	16,586	8,405	8,501	16,906	33,492	13,371	46,863
1961	11,087	7,981	19,068	8,974	8,424	17,398	36,466	15,416	51,882
1962	10,730	9,689	20,419	9,810	8,907	18,717	39,136	16,929	56,065
1963	13,885	8,741	22,626	10,781	9,590	20,371	42,997	19,003	62,000
1964	14,924	9,274	24,198	13,500	10,056	23,556	47,754	20,945	68,699
1965	16,350	11,459	27,809	15,005	10,508	25,513	53,322	23,491	76,813
1966	16,914	12,878	29,792	17,972	10,966	28,938	58,730	25,019	83,749
1967	18,741	13,589	32,330	19,661	12,622	32,283	64,613	26,707	91,320
1968	19,595	14,800	34,395	21,146	13,838	34,984	69,379	[b]	
1969	20,582	15,795	36,377	23,030	14,978	38,008	74,385		
1970	21,712	16,590	38,302	24,579	16,433	41,012	79,314		
1971	22,710	17,501	40,211	25,817	17,667	43,484	83,695		
1972	23,850	18,305	42,155	27,234	18,691	45,925	88,080		
1973	24,672	19,224	43,896	28,486	19,858	48,344	92,240		
1974	25,896	19,887	45,783	29,916	20,771	50,687	96,470		
1975	27,084	20,874	47,958	30,948	21,814	52,762	100,720		
1976	27,901	21,832	49,733	32,483	22,567	55,050	104,783		
1977	28,860	22,490	51,350	33,974	23,685	57,659	109,009		

SOURCE: State Department of Finance, Budget Division, Population and Research Section, January 26, 1968.

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[a] Including Los Angeles Medical Center; excluding San Francisco Medical Center, Davis and Irvine

[b] No forecast is made for graduate enrollment

APPENDIX E-3

PLANNED, ANNUAL INCREASES IN UNIVERSITY OF CALIFORNIA GRADUATE ENROLLMENTS 1969-1977

(1) Year	(2) Planned Increases in Graduate Average Annual Enrollments	(3) Planned Increases in Graduate Summer Quarter Increments	(4) Planned Increases in Total Graduate Average Annual Enrollments
1969	1,910	419	2,329
1970	4,850	671	5,521
1971	2,670	1,027	3,697
1972	2,765	508	3,273
1973	2,740	491	3,231
1974	2,760	512	3,272
1975	2,190	360	2,550
1976	1,851	235	2,086
1977	1,846	232	2,078

APPENDIX E-4

ENROLLMENTS BY LEVEL AND TOTAL COST PER LOWER DIVISION EQUIVALENT UNIVERSITY OF CALIFORNIA

1968	Davis	Santa Barbara	Irvine	Santa Cruz
Lower Division (1.0)	4,232	5,165	1,351	1,393
Upper Division (1.4)	4,125	5,309	1,546	920
L.D. Equivalent	5,775	7,433	2,164	1,288
Graduate (4.0)	2,295	1,754	593	99
L.D. Equivalent	9,180	7,016	2,372	396
Total Unweighted	10,650	12,228	3,490	2,412
Total L.D. Equivalent	19,187	19,614	5,887	3,077
1959*				
Lower Division (1.0)	996	1,475		
Upper Division (1.4)	839	1,245		
L.D. Equivalent	1,175	1,743		
Graduate (4.0)	607	60		
L.D. Equivalent	2,428	240		
Total Unweighted	2,442	2,870		
Total L.D. Equivalent	4,599	3,458		
Total Change-Unweighted	8,208	9,358	3,490	2,412
Total Change in L.D.E.	14,588	16,156	5,887	3,077
Total Capital Const. Costs 1958-1966 & 1962-1966	$102,987,180	$82,993,346	$51,972,999	$41,154,993
Cost/Unweighted Stud.	$12,547	$8,869	$14,892	$17,063
Cost/L.D. Equivalent	$7,060	$5,137	$8,829	$13,375

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*SOURCE: "Summary of Proposed Budget for Current Operations: 1960-61 Fiscal Year"

All costs are in constant 1968 dollars using Engineering News Record Index 1170.

APPENDIX E-5

ENROLLMENTS BY LEVEL AND TOTAL COST PER LOWER DIVISION EQUIVALENT NO SUMMER QUARTER INCREMENTS UNIVERSITY OF CALIFORNIA

1975	Irvine	Santa Cruz
Lower Division (1.0)	3,250	2,520
Upper Division (1.4)	4,150	3,780
L.D. Equivalent	5,810	5,292
Graduate (4.0)	2,700	1,925
L.D. Equivalent	10,800	7,700
Total Unweighted	10,100	8,225
Total L.D. Equivalent	19,860	15,512
Total Capital Costs 1962-1973 in ENR 1170	$176,473,216	$136,210,486
Cost/Unweighted Student	$17,472	$16,561
Cost/L.D. Equivalent	$8,886	$8,781

SOURCE: University of California 1969-1974 Capital Improvement Program, June 21, 1968.

APPENDIX F

SUPPORTING MATERIAL CONCERNING JUNIOR COLLEGES

APPENDIX F-1 — TABLE I

CURRENT AND PROJECTED WEEKLY STUDENT CONTACT HOURS FOR CALIFORNIA JUNIOR COLLEGES

1967-68 — 1977-78
(ANNUAL AVERAGE)

DISTRICT AND/OR COLLEGE	ACTUAL 1967-68 WSCH	PROJECTED 1977-78 WSCH	PERCENT OF INCREASE
ALLAN HANCOCK	31,656	61,152	93%
ANTELOPE VALLEY	25,766	59,004	129
BARSTOW	7,671	21,540	181
BUTTE	1,748	52,768	-
CABRILLO	34,089	77,434	127
CERRITOS	99,900	166,981	67
CHAFFEY	53,005	100,496	90
CITRUS	46,872	88,650	89
COACHELLA VALLEY	19,542	42,042	115
COALINGA	11,388	16,235	43
COLLEGE OF THE SEQUOIAS	47,514	79,236	67
COMPTON	38,150	68,018	78
CONTRA COSTA[1]	147,493	253,897	72
Contra Costa College	51,210	-	-
Diablo Valley College	96,283	-	-
EL CAMINO	128,597	188,025	46
FOOTHILL[1]	127,506	235,569	85
De Anza College	47,506	-	-
Foothill College	80,000	-	-
FREMONT-NEWARK	10,920	74,685	584
GAVILAN	14,803	46,566	215
GLENDALE	44,250	62,640	42
GROSSMONT	53,270	99,941	88
HARTNELL	35,348	61,735	75
IMPERIAL	21,043	36,402	73
KERN[1]	94,276	165,874	76
Bakersfield College	81,916	-	-
Porterville College	12,360	-	-
LASSEN	9,874	17,586	78
LONG BEACH	117,346	199,368	70
LOS ANGELES CITY[1]	641,610	1,190,475	86
East Los Angeles	85,392	-	-
City College	146,469	-	-
Harbor College	65,347	-	-
Pierce College	105,479	-	-
Southwest College	9,482	-	-
Trade-Technical College	108,904	-	-
Valley College	120,537	-	-
LOS RIOS[1]	209,995	353,192	68
American River	92,847	-	-
Sacramento City	117,148	-	-
MARIN	53,289	94,921	78
MERCED	27,106	58,344	115
MONTEREY PENINSULA	40,641	66,158	63
MT. SAN ANTONIO	104,410	175,808	68
MT. SAN JACINTO	8,751	29,172	233
NAPA	25,719	50,830	98
NORTH ORANGE COUNTY[1]	175,947	379,137	115%
Cypress Junior College	34,282	-	-
Fullerton Junior College	141,665	-	-
OCEANSIDE-CARLSBAD	15,797	28,877	83
ORANGE COAST	133,228	344,899	159
Golden West College	34,927	170,200	387
Orange Coast College	98,301	174,699	78
PALO VERDE	3,419	8,033	135
PALOMAR	38,638	86,414	124
PERALTA[1]	147,750	240,695	63
Laney College	69,160	-	-
Merritt College	78,590	-	-
PASADENA	129,805	172,768	33
REDWOODS	22,736	60,021	164
RIO HONDO	67,916	134,645	98
RIVERSIDE	61,284	111,800	82
SADDLEBACK	-	79,282	-
SAN BERNARDINO VALLEY	86,303	150,752	75
SAN DIEGO[1]	142,706	260,232	82
City College	60,270[a]	-	-
Mesa College	812,805	-	-
SAN FRANCISCO	163,810	231,999	42
SAN JOAQUIN DELTA	83,578	136,354	63
SAN JOSE	69,921	140,337	101
SAN LUIS OBISPO	20,486	43,296	111
SAN MATEO	135,315	248,109	83
SANTA ANA	49,275	104,255	112
SANTA BARBARA	39,667	76,566	93
SANTA CLARITO	-	23,715	-
SANTA MONICA	91,809	130,912	43
SHASTA	42,733	84,211	97
SIERRA	36,642	63,441	73
SISKIYOU	9,849	21,698	120
SOLANO	37,159	73,984	99
SONOMA	52,486	96,288	83
SOUTH COUNTY	66,161	111,549	69
STATE CENTER[1]	113,678	192,832	70
Fresno City College	86,114	-	-
Reedley College	27,564	-	-
SWEETWATER	41,423	82,912	100
VENTURA[1]	80,373	184,851	130
Ventura College	59,788	-	-
Moorpark College	20,585	-	-
VICTOR VALLEY	8,044	24,040	199
WEST KERN	8,625	10,395	21
WEST VALLEY	56,033	139,937	150
YOSEMITE	81,988	137,846	68
YUBA	43,838	73,355	67
STATE TOTAL	4,691,970	8,785,181	87%

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[1] Additional Colleges planned for 1977, therefore, breakdown by college not shown for 1977

[a] Includes 2,781 WSCH reported for Evening College.

APPENDIX F-1 -- TABLE 2

WEEKLY STUDENT CLASS HOUR ENROLLMENT IN CALIFORNIA JUNIOR COLLEGES COMPARED WITH WEEKLY STUDENT CLASS HOUR ENROLLMENT CAPACITY

FALL 1967

DISTRICT AND/OR COLLEGE	WSCH ENROLLMENT FALL 1967	WSCH ENROLLMENT CAPACITY		
		Existing Fall 1967	Excess or Deficit Fall 1967[1]	Percent of Capacity Used
ALLAN HANCOCK	31,656	58,730	27,074	53.9%
ANTELOPE VALLEY	25,766	66,640	40,874	38.7
BARSTOW	7,671	11,010	3,339	69.7
BUTTE[2]	1,748	-	-	-
CABRILLO	34,089	83,030	48,941	41.0
CERRITOS	99,900	91,950	(7,950)	108.6
CHAFFEY	53,005	73,310	20,305	72.3
CITRUS	46,872	99,600	52,728	47.1
COACHELLA VALLEY	19,542	22,230	2,688	87.9
COALINGA	11,388	20,640	9,252	55.2
COLLEGE OF THE SEQUOIAS	47,514	70,160	22,646	67.7
COMPTON	38,150	67,840	29,690	56.2
CONTRA COSTA	147,493	147,050	(443)	100.3
Contra Costa College	51,210	70,140	18,930	73.0
Diablo Valley College	96,283	78,810	(17,473)	122.2
EL CAMINO	128,597	163,260	34,663	78.8
FOOTHILL	127,506	183,430	55,924	69.5
De Anza College	47,506	92,750	45,244	51.2
Foothill College	80,000	90,680	10,680	88.2
FREMONT-NEWARK[2]	10,920	9,110	(1,810)	119.9
GAVILAN	14,803	12,280	(2,523)	120.5
GLENDALE	44,250	69,717	25,467	63.5
GROSSMONT	53,270	119,890	66,620	44.4
HARTNELL	35,348	40,430	5,082	87.4
IMPERIAL	21,043	30,310	9,267	69.4
KERN	94,276	98,210	3,934	96.0
Bakersfield College	81,915	85,260	3,344	96.1
Porterville College	12,360	12,950	590	95.4
LASSEN	9,874	8,320	(1,554)	118.7
LONG BEACH	117,346	107,080	(10,266)	109.6
LOS ANGELES CITY	641,610	798,540	156,930	80.3
East Los Angeles	85,392	98,920	13,528	86.3
City College	146,469	153,910	7,441	95.2
Harbor College	65,347	58,090	(7,257)	112.5
Pierce College	105,479	122,190	16,711	86.3
Southwest College	9,482	29,750	20,268	31.9
Trade-Technical College	108,904	156,980	48,076	69.3
Valley College	120,537	178,700	58,163	67.5
LOS RIOS	209,995	222,940	12,945	94.2
American River	92,847	118,880	26,033	78.1
Sacramento City	117,148	104,060	(13,088)	112.6
MARIN	53,289	65,120	11,831	81.8
MERCED	27,106	28,100	994	96.5
MONTEREY PENINSULA	40,641	65,250	24,609	62.3
MT. SAN ANTONIO	104,416	182,516	78,100	57.2
MT. SAN JACINTO	8,751	25,240	16,489	34.7
NAPA	25,719	34,350	8,631	74.9

DISTRICT AND/OR COLLEGE	WSCH ENROLLMENT FALL 1967	WSCH ENROLLMENT CAPACITY		
		Existing Fall 1967	Excess or Deficit Fall 1967[1]	Percent of Capacity Used
NORTH ORANGE COUNTY	175,947	155,650	(20,297)	113.0%
Cypress Junior College	34,282	35,980	1,698	95.3
Fullerton Junior College	141,665	119,670	(21,995)	118.4
OCEANSIDE-CARLSBAD	15,797	37,370	21,573	42.3
ORANGE COAST	133,228	145,580	12,352	91.5
Golden West College	34,927	35,640	713	98.0
Orange Coast College	98,301	109,940	11,639	89.4
PALO VERDE	3,419	7,490	4,071	45.6
PALOMAR	[illegible]	84,460	45,822	45.7
PERALTA	[illegible]	161,630	13,880	91.4
Laney College[2]	69,160	76,210	7,050	90.7
Merritt College[2]	78,590	85,420	6,830	92.0
PASADENA	129,805	148,320	18,515	87.5
REDWOODS	22,736	28,250	5,514	80.5
RIO HONDO	67,916	106,400	38,484	63.8
RIVERSIDE	61,284	70,320	9,036	87.2
SADDLEBACK[3]	-	-	-	-
SAN BERNARDINO VALLEY	86,303	119,960	33,657	71.9
SAN DIEGO	142,706[a]	178,300	35,594	80.0
City College	60,270	65,170	4,900	92.5
Mesa College	82,436	113,130	30,694	72.9
SAN FRANCISCO	163,810	165,840	2,030	98.8
SAN JOAQUIN DELTA[2]	83,578	88,880	5,302	94.0
SAN JOSE	69,921	74,620	4,699	93.7
SAN LUIS OBISPO	20,486	60,950	40,464	33.6
SAN MATEO	135,315	119,810	(15,505)	112.9
SANTA ANA	49,275	74,140	24,865	66.5
SANTA BARBARA	39,667	40,920	1,253	96.9
SANTA CLARITO[3]	-	-	-	-
SANTA MONICA	91,809	79,459	(12,350)	115.5
SHASTA	42,733	58,840	16,107	72.6
SIERRA	36,642	48,750	12,108	75.2
SISKIYOU	9,849	13,650	3,801	72.2
SOLANO[2]	37,159	37,450	291	99.2
SONOMA	52,486	82,540	30,054	63.6
SOUTH COUNTY	66,161	134,790	68,629	49.1
STATE CENTER	113,678	119,280	5,602	95.3
Fresno City College	86,114	85,480	(634)	100.7
Reedley College	27,564	33,800	6,236	82.0
SWEETWATER	41,423	66,070	24,647	62.7
VENTURA	80,373	119,174	38,601	67.4
Ventura College	59,788	82,534	22,746	72.4
Moorpark College	20,585	36,640	16,055	56.2
VICTOR VALLEY	8,044	18,200	10,156	44.2
WEST KERN	8,625	15,770	7,145	54.7
WEST VALLEY	56,033	46,460	(9,573)	120.6
YOSEMITE	81,988	82,160	172	99.8
YUBA	43,838	44,260	422	99.0
STATE TOTAL[a]	4,691,970	5,912,020	1,221,738[b]	79.4%

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[1] Existing capacity minus enrollment. Deficit capacity is shown in parenthesis.

[2] Temporary facilities.

[3] No campus in 1967.

[a] Includes 2,781 WSCH reported for evening college.

[b] On an individual district basis. On a statewide basis the capacity not used is

APPENDIX F-1 — TABLE 3

THE ADDITIONAL CAPACITY REQUIRED TO MEET THE WEEKLY STUDENT
CLASS HOUR ENROLLMENT PROJECTED FOR CALIFORNIA JUNIOR COLLEGES
IN 1977 BEYOND THE CAPACITY NOW EXISTING, FUNDED OR UNDER CONSTRUCTION
(WITHOUT YEAR-ROUND OPERATION)

DISTRICT AND/OR COLLEGE	Existing Capacity 1967[1]	Capacity Under Construction	Capacity Funded	Total Capacity Available	Projected WSCH Enrollment 1977[2]	Additional Capacity Needed
ALLAN HANCOCK	58,730	1,440	-	60,170	61,152	982
ANTELOPE VALLEY	66,640	-	5,740	72,380	59,004	None
BARSTOW	11,010	-	-	11,010	21,540	10,530
BUTTE	-	-	-	-	52,768	52,768
CABRILLO	83,030	-	-	83,030	77,434	None
CERRITOS	91,950	21,970	790	114,710	166,981	52,271
CHAFFEY	73,310	11,800	-	85,110	100,496	15,386
CITRUS	99,600	-	13,890	113,490	88,650	None
COACHELLA VALLEY	22,230	-	-	22,230	42,042	19,812
COALINGA	20,640	-	-	20,640	16,235	None
COLLEGE OF THE SEQUOIAS	70,160	-	-	70,160	79,236	9,076
COMPTON	67,840	-	-	67,840	68,018	178
CONTRA COSTA	147,050	-	-	147,050	253,897	106,847
Contra Costa College	70,140	-	-	70,140	-	-
Diablo Valley College	76,910	-	-	76,910	-	-
EL CAMINO	163,260	860	38,260	202,380	180,025	None
FOOTHILL	183,430	-	6,840	190,270	235,569	45,299
De Anza College	92,750	-	6,840	99,590	117,784	18,194
Foothill College	90,680	-	-	90,680	117,785	27,105
FREMONT-NEWARK	9,110	-	-	9,110	74,865	65,755
GAVILAN	12,280	6,280	-	18,560	46,560	28,000
GLENDALE	69,717	4,410	-	74,127	62,640	None
GROSSMONT	119,850	-	-	119,850	99,941	None
HARTNELL	40,430	-	-	40,430	61,735	21,305
IMPERIAL	30,310	-	-	30,310	36,402	6,092
KERN	98,210	-	5,580	103,790	165,874	62,084
Bakersfield College	85,260	-	5,580	90,840	139,339	48,499
Porterville College	12,950	-	-	12,950	26,535	13,585
LASSEN	8,320	-	-	8,320	17,586	9,266
LONG BEACH	107,080	1,390	7,960	116,430	199,368	82,938
LOS ANGELES CITY	790,540	38,930	44,260	873,730	1,190,475	316,745
East Los Angeles	98,920	-	410	99,330	-	-
City College	153,910	-	-	153,910	-	-
Harbor College	58,090	-	39,950	98,040	-	-
Pierce College	122,190	9,290	-	131,480	-	-
Southwest College	29,750	6,090	-	35,840	-	-
Trade-Technical College	156,980	15,550	3,900	176,430	-	-
Valley College	178,700	-	-	178,700	-	-
LOS RIOS	217,160	8,300	430	225,890	353,392	127,502
American River	118,080	-	-	118,080	-	-
Sacramento City	100,080	8,300	430	108,810	-	-
MARIN	65,120	-	23,550	88,670	94,921	6,251
MERCED	28,100	-	8,330	36,430	58,344	21,914
MONTEREY PENINSULA	69,250	33,840	6,660	109,750	66,150	None

(Continued on next page)

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[1] From Table 2.

[2] From Table 1.

TABLE 3 (Continued)

DISTRICT AND/OR COLLEGE	Existing Capacity 1967[1]	Capacity Under Construction	Capacity Funded	Total Capacity Available	Projected WSCH Enrollment 1977[2]	Additional Capacity Needed
MT. SAN ANTONIO	182,510	-	-	182,510	175,808	None
MT. SAN JACINTO	25,240	1,520	6,490	33,250	29,172	None
NAPA	34,350	-	9,710	44,060	50,830	6,770
NORTH ORANGE COUNTY	155,650	65,928	-	221,578	379,137	157,559
Cypress Junior College	35,980	57,528	-	94,100	-	-
Fullerton Junior College	119,670	8,400	-	128,070	-	-
OCEANSIDE-CARLSBAD	37,370	-	310	37,680	28,877	None
ORANGE COAST	145,580	-	20,410	165,990	344,899	178,909
Golden West College	35,640	-	20,410	56,050	170,200	114,150
Orange Coast College	109,940	-	-	109,940	174,699	64,759
PALO VERDE	7,490	-	480	7,970	8,033	63
PALOMAR	84,460	-	-	84,460	86,414	1,954
PERALTA	161,630[c]	-	227,140[a/b]	388,770	240,695	None
Laney College	76,210[c]	-	116,800[b]	193,010	-	-
Merritt College	85,420[c]	-	42,330[b]	127,750	-	-
PASADENA	148,320	23,630	-	171,950	172,768	818
REDWOODS	28,250	-	-	28,250	60,021	31,771
RIO HONDO	106,400	-	-	106,400	134,645	28,245
RIVERSIDE	70,320	7,750	(-2,600)[d]	75,470	111,800	36,330
SADDLEBACK[2]	-	-	-	-	79,282	79,262
SAN BERNARDINO VALLEY	119,960	-	-	119,960	150,752	30,792
SAN DIEGO	178,300	-	26,330[e]	204,630	260,232	55,602
City College	65,170	-	-	65,170	-	-
Mesa College	113,130	-	18,330	62,218	-	-
SAN FRANCISCO	165,840	4,370	28,280	198,490	231,999	33,509
SAN JOAQUIN DELTA	88,880	-	-	88,880	136,354	47,474
SAN JOSE	74,620	-	-	74,620	140,337	65,717
SAN LUIS OBISPO	60,950	-	-	60,950	43,296	None
SAN MATEO	115,810	87,240	30,030	237,080	248,109	11,029
SANTA ANA	74,140	-	4,680	78,820	104,255	25,435
SANTA BARBARA	40,920	-	9,840	50,760	76,566	25,806
SANTA CLARITO[2]	-	-	-	-	23,715	23,715
SANTA MONICA	79,459	-	3,150	82,609	130,912	48,303
SHASTA	58,840	-	-	58,840	84,211	25,371
SIERRA	48,750	-	-	48,750	63,441	14,691
SISKIYOU	13,650	-	2,670	16,320	21,698	5,378
SOLANO	37,450	-	-	37,450	73,984	36,534
SONOMA	82,540	-	2,070	84,610	96,288	11,678
SOUTH COUNTY	134,790	-	-	134,790	111,549	None
STATE CENTER	119,280	11,030	12,260	142,570	192,832	50,262
Fresno City College	85,480	9,780	-	95,260	-	-
Reedley College	33,800	1,250	12,260	47,310	-	-
SWEETWATER	66,070	-	1,370	67,440	82,912	15,472
VENTURA	119,174	-	-	119,174	184,851	65,677
Ventura College	82,534	-	-	82,534	-	-
Moorpark College	36,640	-	-	36,640	-	-
VICTOR VALLEY	18,200	4,890	-	23,090	24,040	950
WEST KERN	15,770	-	-	15,770	10,395	None
WEST VALLEY	46,460	20,000	18,920	85,380	139,937	54,557
YOSEMITE	82,160	-	-	82,160	137,846	55,686
YUBA	44,260	3,710	1,760	49,730	73,355	23,625
STATE TOTAL	5,912,020	345,308	565,590	6,822,918	8,785,181	2,309,971[f]

[1] From Table 2.
[2] From Table 1.

[a] Includes 67,819 WSCH funded at proposed Alameda and Berkeley campuses.
[b] To replace existing facilities.
[c] Leased facilities.
[d] Building to be funded will result in another building being torn down (larger than the one being funded).
[e] Includes 8,000 WSCH at proposed Miramar campus.
[f] On a district basis; on a statewide basis the capacity is 2,052,263 (8,875,181 - 6,822,918)

APPENDIX F-2

ECONOMIES-OF-SCALE IN JUNIOR COLLEGE OPERATION

Virtually all aspects of the Junior College instructional program, including both classroom teaching and indirect support such as classroom maintenance and capital costs appear to be subject to increasing economies in the scale of operation; i.e., unit costs of the program decrease as size (enrollment) increases. Empirical proof of this proposition is rather difficult to accumulate, however, for in order to say anything about decreasing unit costs, it must be assumed that the quality and diversity of instruction offered at all colleges examined are equivalent regardless of college size. If small institutions can operate economically only by limiting their curriculum (to less than that offered at larger institutions), then it may be concluded that economies-of-scale in larger operations do in fact exist. However, if this is the practice among the smaller colleges, empirical examination of unit costs will not reveal such economies since the programs of the variously-sized colleges are not comparable. The following discussion, therefore, includes the topic of the range and diversity of curriculum (program) as well as the more obvious considerations of operating and capital costs.

Range of Program

There is evidence that the smaller Junior Colleges do not offer the same diversity or range of courses as do the larger of the Junior Colleges.[1] Not only do the larger Junior Colleges offer a greater number of different subject fields, but within these subject fields they offer a more diverse menu of courses.[2] Using fall 1963 data for California Junior Colleges, the number of subject fields correlated positively (and significantly) with college size (r=.760) while a measure of courses per subject field also correlated significantly with college size (r=.807).[3]

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[1] In this analysis, the terms "range" and "diversity" are generally defined by the number of courses and different subject fields offered by the college.

[2] The "subject fields" used here are based upon the Standard Classification of Subject Fields and Services used in the 1965 California Public Higher Education Cost and Statistical Analysis. Examples of different subject fields in the Social Sciences:

3200	Economics
3300	Geography
3400	History
3500	Political Science

[3] The measure is actually course credit hours per subject field; however, the average number of credit hours per course should not vary sufficiently among colleges as to distort the use of this measure as an index of the number of courses.

Table F-2.1 indicates the magnitude of the differences in instructional program by size of college. "Large" and "small" colleges are defined as those falling in the fourth and first quartiles, respectively, of a sample of 71 California Junior Colleges distributed according to size for fall 1963. The large colleges held nearly five times the number of courses, on the average, that the small colleges reported. Note also that the large colleges offered an average of 54 subject fields of instruction while the small colleges averaged only 33 such fields.

TABLE F-2.1

RELATIONSHIPS OF COLLEGE SIZE AND INSTRUCTIONAL PROGRAM, CALIFORNIA JUNIOR COLLEGES, FALL 1963

	Large Colleges	Systemwide	Small Colleges
	(unweighted averages)		
TOTAL CURRICULUM			
Number of subject fields	53.6	43.2	32.7
Number of course credit hours	1221.0	686.9	276.9
Course credit hours per subject field	22.5	14.9	8.6
ACADEMIC			
Number of subject fields	23.5	22.1	21.0
Number of course credit hours	566.7	338.8	166.7
Course credit hours per subject field	24.1	15.3	7.9
TRADE-TECHNICAL AND BUSINESS			
Number of subject fields	30.1	21.1	11.7
Number of course credit hours	654.3	348.1	110.2
Course credit hours per subject field	21.9	15.1	9.9

SOURCE: CCHE, Cost and Statistical Study, 1965.

There is no apparent reason why all Junior Colleges ought to offer equivalent curricula. However, the student attending the larger Junior College does have a larger number of courses from which to develop his schedule than does his conterpart attending a small Junior College.

The data indicate there was only minor variation in the number of "academic" (other than "business" and "trade-technical") courses among all colleges. The small colleges offered only two less academic subject fields, on the average, than did the large colleges. In contrast, large colleges offered nearly three times the number of subject fields in trade-technical instruction as did the small colleges. The data thus suggest that the transfer student is probably afforded, in either the small or large Junior College, a sufficient variety of basic "survey" courses as to accomplish his objective of moving to a four-year institution after two years of Junior College work. The terminal student, on the other hand, may find that offerings in certain technical-vocational subjects are limited or unavailable in the small college.

Another characteristic of the small college operation may be that certain supplementary courses in the academic subjects designed to "broaden" the general education of the student, are not offered. There is no firm evidence to support this supposition, although the large college did offer 24 course credit hours in each academic subject field (probably more than seven courses in each field) while the small colleges reported an average of 7.9 course credit hours or less than three courses per subject field. Thus, while all colleges offer most, if not all, of the basic academic subject fields, it is evident that the small colleges offer fewer courses per field than do the large colleges.

Obviously, no inferences may be drawn from this data regarding (1) the quality of what is taught or (2) the number of subject fields or courses that ought to be taught in any Junior College or department within a Junior College. Such judgments are beyond the scope of this analysis. What is demonstrated, however, is the existence, at the large college, of either an ability or combined desire and ability to offer a greater range of courses than is the case in the small college. If this phenomenon took place as a result of higher unit expenditures, the case for scale economies would be ambiguous. But, as shown by the cost data, large colleges offer simultaneously a more extensive curriculum at generally lower cost than do the small colleges. In fact, it was found that during the fall 1963, the number of subject fields offered increased as the cost per student decreased; i.e., a negative correlation ($r=-.539$). Only if such low cost operations were achieved by inordinately large class sizes (too little sectioning) or unreasonably large faculty teaching loads, etc., could such (operations) be considered as representative of "false economies."

Costs

As noted above, the analysis of scale economies includes both operating and capital considerations. Capital costs are especially important if the major question is whether a district should operate with one or several college campuses.

The costs of master planning, land acquisition, site development, and basic utilities are added when a new campus is initiated and would not be incurred to any appreciable extent if the capacity of an existing campus was expanded. Such expenditures are significant. Land costs currently vary from about $10,000 per acre for rural sites to $100,000 per acre in urban areas. New Junior College campuses, with few exceptions, are being planned to encompass not less than 100 acres. Thus, even the rural Junior College campus generally requires in excess of $1 million in land acquisition costs alone.

There are, in addition, certain physical facilities which would serve for a single campus of, say, 10,000 students but which would, of necessity, be duplicated if the same group of students were split between two campuses. Such buildings as the gymnasium, theatre and auditorium, student center, and the corporation yard are only partially sized as a function of student enrollment and normally exist in some form on a campus regardless of its enrollment.

The amount of space per student in the library facility also appears to be a declining function of student enrollment. The book collection and facility required for its housing do not increase in proportion to the increase in students. This is due primarily to the need for a core collection to serve the basic curriculum regardless of the number of students on hand.

More faculty office area and supporting facilities would be required in the "two, small campus" situation than in the "one, large campus" situation due to, simply, the larger student: faculty ratio in the latter situation as explained below.

Other than the above, most facilities will be sized to accommodate anticipated enrollments and are added at a rate proportionate to the growth rate of enrollment.[1] Unfortunately, no adequate data are available which would permit empirical examination of the relationship between capital costs and size in the Junior Colleges.

The ratio of students to faculty is of major importance in comparisons of Junior College operating costs since faculty salaries constitute more than 55% of total operating outlays and since determination of the supporting clerical, technical, and administrative staff is based in large part upon the number of faculty. A large "ratio" is usually associated with a low cost (per student) program while a small ratio results in high costs per student. The "ratio" itself is a function of the type and extent of course work undertaken by the student, average class size, and the units of work expected of faculty in classroom teaching as follows:

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[1] As a general rule in the four-year segments, larger campuses operate with less capacity relative to enrollment than do the small campuses. This phenomenon appears to be related more to the factor of building lead times than to any inherent scale economies in facilities utilization, however.

$$S/T = f\ (s,\ c,\ w)$$

where, S = total number of students
T = total number of faculty
s = units of course work taken per student
c = average class size
w = units of course work taught per faculty; and

$f_s < 0$, $f_c > 0$, and $f_w > 0$. The student: faculty ratio varies (1) inversely with the amount of course work taken by each student and (2) directly with the average class size and faculty classroom teaching load.

The number of course units taken per student is generally similar in all colleges and invariant with respect to college size. Faculty teaching workload is normally a policy determination of the local college governing board and would not appear to be related, in any logical way, to college size. The third variable, average class size, is largely a function of (1) the total number of students enrolled, (2) course and sectioning policies, and (3) the type and method of instruction (i.e., graduate labs and seminars generally contain fewer students than do lower division lectures). Assuming that generally similar course and sectioning policies and instructional methods exist among the Junior Colleges, the crucial relationship is that between average class size and the total number of students enrolled. Empirical evidence for California Junior Colleges during the fall 1963 indicates that this relationship is positive and significant. For a sample of 71 colleges, mean class size and total college size demonstrated a relatively high, positive correlation ($r=.654$).[1] If this relationship holds true generally, larger colleges should be characterized by high student: faculty ratios (S/T) and exhibit low costs per student.

In addition to direct teaching costs, there are certain, essentially indivisible, functions of general administration, library, student services, and plant maintenance that do not increase proportionately with enrollment increases. For example, a college normally employs only one president, one head librarian, one dean of students, etc., regardless of the size of the student enrollment. Numerous other activities in these areas are related only partially to enrollment. Such relationships are amply demonstrated by 1966-67 expenditure data for California Junior College districts. Cost per student for general administration correlated negatively and significantly ($r=-.517$) with college size. The cost per student for plant maintenance and operation demonstrated a similar correlation with college size ($r=-.469$).

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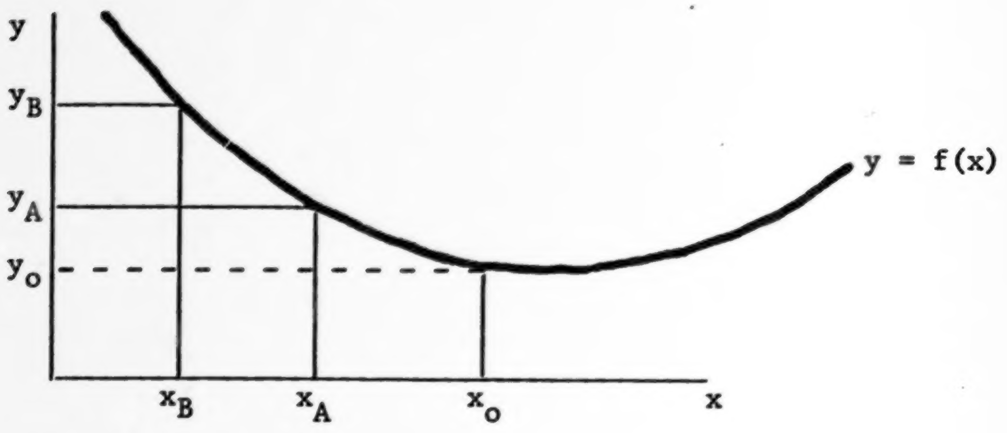
[1] Notably, this relationship occurs even though the number of courses per subject field is much larger in large, as opposed to small, colleges (a factor which tends to reduce average class size).

Thus, it is expected that, other things being equal,[1] total operating costs per student will decrease as size increases, though not necessarily without limit. This relationship of cost and size is shown graphically in Figure F-2.1 where y (unit cost) is a negative function of x (college size) between $x=0$ and $x=x_o$. The larger institution (A) is less expensive per student than the smaller institution (B).

Figure F-2.1

THEORETICAL RELATIONSHIP OF SIZE
AND COST IN JUNIOR COLLEGE OPERATION



y = Unit cost.
x = Size of institution.

There may be a size, x_o, where average costs reach a minimum. Beyond this size, additional sections of numerous courses must be added as initial sections become too large and certain administrative and supporting units must be duplicated to maintain acceptable control over the operations. The function f(x) may, therefore, be positive for $x > x_o$. Note, however, that the following analysis of cost and size relationships indicated that none of the existing California Junior Colleges are operating in the size range of increasing diseconomies ($x > x_o$). The largest college examined enrolled nearly 12,000 in average daily attendance (ADA) during 1966-67. The results of the analysis are such as to indicate that there are increasing economies of scale over the range of from zero to 12,000 ADA and that, while the size of minimum average cost (x_o) is not determined, it would appear to be at a point greater than 12,000 ADA.

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[1] It should be again emphasized that a rather important variable, the quality of instruction that is carried on, is assumed constant throughout this analysis.

Empirical examination of the economies-of-scale proposition is difficult since "other things" are seldom, if ever, equal in practice. The breadth of curriculum factor has already been noted. If, for example, the larger Junior Colleges pay higher salaries and demand fewer classroom teaching hours of their faculty than do the smaller colleges, the cost data are distorted even further. Another variable, district financial ability (as measured in assessed valuation per student), is known to be positively correlated with unit costs ($r = .786$ for 1963-64 and $r = .744$ for 1966-67). As noted elsewhere in this paper, district organization has significant implications for expenditures for certain functions. These factors, and others that may be present but unaccounted for, will tend to distort any scale-economies that would otherwise be demonstrated, especially if such factors are significantly related to college size.

Examination of the data for California Junior College size and unit expenditure relationships during 1963-64 reveals distribution that is generally curvilinear. A function of the following form is therefore employed:

$$Y = b\ X^m$$

or taking logarithms:

$$\log Y = \log b + m \log X$$

where,

Y = district expenditures per unit of average daily attendance,

X = the average college size in each district, and

where b & m are constants.

The constants are computed by the method of least squares using data for 48 junior college districts. The result is:

$$\log Y = \underset{(0.0574)}{3.3746} - \underset{(.0224)^*}{.1769} \log X, \qquad r^2 = .572$$

(The standard errors of estimate are shown in parentheses.) Thus, even in the face of the disturbing factors mentioned above, significant scale economies in operating costs are evident for 1963-64.[1]

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[1] To confirm the superiority of the logarithmic function over one composed of natural numbers, a regression using the form $Y = b + mX$ was applied to the same data with the following results:

$$Y = \underset{(131.8088)}{710.9513} - \underset{(0.0081)}{0.0280} X, \qquad r^2 = .205$$

*Significantly less than zero using $t_{.01}$ in a two-tailed test.

The 1963-64 data may be further analyzed in an attempt to correct for some of the influence of curriculum breadth variations. This correction consists of removing from the sample those colleges that reported offering extreme numbers (either high or low) of subject fields.[1] The regression analysis for the remaining colleges (34 in number) that demonstrate the "more homogenous" curricula yields the following results:

$$\log Y = \underset{(0.0331)}{3.6568} - \underset{(.0241)^{*}}{.2652} \log X \qquad r^2 = .789$$

The correction results in a substantially better "fit" of the data as well as a greater "elasticity" of unit cost with respect to college size.[2]

As noted, expenditures and financial ability are highly positively correlated. At the same time, financial ability and size appear to correlate negatively ($r = -.441$ during 1963-64 and $r = -.264$ during 1966-67). Thus, some of the cost variation attributed to size may be due in part to the financial ability of the district.

This finding would tend to reduce the impact of the economies-of-scale proposition in that one may argue it is primarily district financial ability, rather than size, that determines the level of expenditure per student. However, the higher expenditure of the smaller district results, as shown above, in a less extensive program. Expenditure and tax effort correlate positively ($r=.192$ during 1966-67) while size and tax effort ($r=-.001$) and ability and effort ($r=-.043$) correlate negatively. None of these relationships, however, are significant.

The mechanism of causation, therefore, appears to be that in an effort to offer a comprehensive or acceptable program, the smaller district is required to expend greater sums per student due primarily to the size factor. The higher expenditure is accomplished primarily by relatively greater financial ability since tax effort appears to be unrelated to college size. For the small college to offer programs comparable to those of the larger colleges would require either greater tax effort or financial ability or both.

While the above conclusion appears to be consistent with the data presented herein, a more rigorous test of the economies-of-scale proposition would employ a function of the following form:

$$Y = bX^{m}A^{n}C^{q}D^{r}$$

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[1] The "extreme" cases were identified as those colleges whose number of subject fields fell more than one standard deviation from the system-wide mean number of subject fields per college.

[2] Size elasticity is the percentage change in unit cost related to the percentage change in college size and is measured by m. $^{m}\mathrm{II} = -.2652$, for the corrected data, indicates greater decreases in cost due to size increases than does $^{m}\mathrm{I} = -.1769$ for the uncorrected data.

*Significantly less than zero using $t_{.01}$ in a two-tailed test.

where,

X = size
A = financial ability
C = extent of curriculum
D = type of district organization
Y = unit expenditure
b, m, n, q and r are constants

Even in this examination, some of the importance of size in the determination of variation in expenditures will likely be overshadowed by the financial ability variable. Note, however, that the local Junior College governing board is generally able to determine the average size of its campus(es), but is seldom able to exert any significant control over its assessed valuation per student.

Another way of looking at the 1963-64 size-cost distribution is to define "high and low" cost colleges as being those with higher or lower costs, respectively, than the median cost college and "large and small" colleges as being larger or smaller than the median size college. The numbers of colleges in each category are then,

Type	Number	Percentage
Small, high cost colleges	16	33%
Small, low cost colleges	8	17
Large, high cost colleges	9	19
Large, low cost colleges	15	31
	48	100%

As expected from the regression values, nearly two-thirds of the colleges fall into the small-high and large-low cost categories.

A similar analysis of 1966-67 data for 58 California Junior College districts resulted in the following:

$$\log Y = \underset{(0.0648)}{3.1153} - \underset{(.0251)^*}{.0771} \log X, \qquad r^2 = .142$$

and by type,

Type	Number	Percentage
Small, high cost colleges	18	31%
Small, low cost colleges	11	19
Large, high cost colleges	10	17
Large, low cost colleges	19	33
	58	100%

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*Significantly less than zero using $t_{.01}$ in a two-tailed test.

While the regression coefficients are significant (at the 1% level) and carry the appropriate sign, the unit cost reported in 1966-67 appears to be less "size-elastic" (m = -.0771) than was the case three years earlier.

Another empirical examination of the scale-economies proposition was performed upon 1965-66 data for public two-year colleges in 37 states.[1] For this analysis, the unit cost was the reported expenditure per unit of total enrollment for all public two-year institutions in a state and the size variable was the mean campus size for all public two-year colleges in that same state. The results of this analysis are strikingly similar to the results for the two sets of California data:

$$\log Y = \underset{(0.1637)}{3.4854} - \underset{(.0758)^*}{.2090} \log X, \qquad r^2 = .179$$

and by type:

Type	Number	Percentage
Small, high cost	11	31%
Small, low cost	7	19
Large, high cost	7	19
Large, low cost	11	31
	36	100%

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[1] For description of the nature and origin of this data, see CCHE Study No. 68-11, Study of Income for Public Higher Education, May, 1968.

*Significantly less than zero $t_{.01}$ in a two-tailed test.

APPENDIX F-3

SENATE CONCURRENT RESOLUTION NO. 14, 1966

Relative to Junior College Capital Outlay

WHEREAS, The Master Plan for Higher Education recommended that "a continuing program be devised and adopted by the Legislature that would distribute construction funds either through grants or loans or both, for capital outlay purposes annually to junior colleges as determined by growth, this program being for the purpose of assisting junior colleges to meet the facility needs of projected enrollments and of the students to be diverted to the junior colleges"; and

WHEREAS, A program of continuing state aid for junior college construction was enacted by the Legislature by the passage of Senate Bill 318 at the 1965 Regular Session (Chapter 1272 of the 1965 Statutes); and

WHEREAS, Experience shows that the provisions of Senate Bill 318 are not adequate to fulfill the purposes of the bill in that the bill: (1) fails to coordinate the state and the federal programs of aid for junior college construction, (2) fails to coordinate the program of state aid for junior college construction with other state programs of aid to education, (3) contains a method of calculating district entitlement which is unrelated to the need for a particular construction project at a particular junior college district, which hinders the Legislature from making flexible judgments regarding the relative financial needs of the three segments of higher education, and which encourages administrative agencies to calculate junior college growth and the cost of junior college construction in a manner which underestimates the needs, (4) fails to allow sufficient time for state administrative agencies to review and to evaluate, for the benefit of the Legislature, junior college construction proposals, and (5) fails to combine into one junior college construction program previous legislation on this subject (i.e., the Junior College Tax Relief Act and the Junior College Facility Construction Law of 1963) money from which is still available to some junior college districts; now, therefore, be it

RESOLVED BY THE SENATE OF THE STATE OF CALIFORNIA, THE ASSEMBLY THEREOF CONCURRING, That no later than January 31, 1967, the Coordinating Council for Higher Education shall: (1) study the program of state aid for junior college construction assistance, (2) advise the Governor and the Legislature as to the purposes and objectives of this program, (3) recommend changes in the present program, and (4) prepare statutory proposals to carry out the recommendations; and be it further

RESOLVED, That in carrying out the directions specified in this resolution the Co-ordinating Council for Higher Education shall give consideration to the inadequacies of Senate Bill 318, by considering the following factors, and any other factors the council deems relevant: (1) the need for state administrative review of junior college projects and proposed financing before funding by the Legislature, (2) the utilization of existing and new facilities, (3) the need to develop construction allowances based upon actual project costs, (4) the need for long-range construction planning, (5) the need for equalization of district ability, (6) the assessment of relative district need, (7) the amount of student growth, (8) the existence of inadequate or obsolete facilities, (9) the coordination of the state junior college construction program with federal construction assistance programs and, insofar as possible, other state construction and support programs, and (10) the need to consider all capital outlay requirements, including site acquisition, site development, new construction, initial equipment, renovation, and project planning; and be it further

RESOLVED, That the Secretary of the Senate is hereby directed to transmit a copy of this resolution to the Director of the Coordinating Council for Higher Education.

APPENDIX G

METHODS OF PROVIDING SERVICE TO STUDENTS IN ISOLATED AREAS -- SOME COST CONSIDERATIONS FOR STATE COLLEGES

The 1964 Council study determined a need to exist for State College services when projected potential enrollment would attain a minimum of 3000 students within seven to ten years after the first students were admitted. Kern County was considered such an area of isolation and the Legislature has since authorized that a college be developed in Bakersfield. This new college is planned to admit its first students in the fall of 1970 and will attain a projected enrollment of 3470, including the summer increment for year-round operations, by the year 1980-81. The following considers whether it is, in fact, wise economically to serve geographically isolated students by construction of new centers, or to seek other methods of assuring student mobility.

As a first step in this exploration, Table G-1.1 has been prepared indicating the relative "levels of State College service" to the several regions of the State from 1960 to 1967, and estimated for 1980. The table relates total State College enrollments (all class levels) to prior year public high school graduates, by ten geographic regions and the state as a whole. Although all students enrolled in a State College do not originate from the region in which the college is located, most do. Thus, the relationship of State College enrollments to high school graduates, by region, is believed a reasonable indication of relative State College service. The table indicates an increase in this relationship for the State from 39.7% in 1960 to 49.6% in 1967, and is projected to 74.4% in 1980 for existing and authorized State Colleges.

In terms of specific regions, all regions of the state, with the exception of the North San Joaquin Valley Area, are projected to have reasonable levels of State College service in the year 1980-81.

Thus, for purposes of analysis of costs of serving an isolated area the North San Joaquin Valley Area, specifically the Merced-Mariposa County area, was analyzed to determine potential enrollment should a State College be located therein.[1] (San Joaquin, Amador, Calaveras, Stanislaus and Tuolumne Counties were considered to be within a secondary enrollment zone for student participation for a potential college.)

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[1] The factors used to develop potential enrollments were those used for Kern County - an isolated area - in the 1964 report which were initially developed by the Office of Institutional Research of the California State Colleges. For example, it was assumed that first-time freshmen as a percent of prior high school graduates would be 12.8% from the primary zone and 2.3% from the secondary zone. First-time freshmen from the primary and secondary zones would be 95% of the first-time from California. First-time freshmen from California would be 95% of the total first-time. Undergraduate transfers would be 91.8% of first-time freshmen. Returning students would be 68.7% of prior year total undergraduate enrollment. Finally, graduate enrollment would be 6.4% of total undergraduate enrollment. These percentages would not be reached until ten years after the first students were admitted.

Table G-1.1

RATES OF PARTICIPATION OF HIGH SCHOOL GRADUATES IN THE STATE COLLEGE SYSTEM FOR THE YEARS 1960-61, 1967-68 AND 1980-81

	ACTUAL						PROJECTED		
	High School Graduates 1959-60	State College Enrollment 1960-61	Ratio	High School Graduates 1966-67	State College Enrollment 1967-68	Ratio	High School Graduates 1979-80	State College Enrollment 1980-81	Ratio
I Greater Los Angeles Area									
Los Angeles County	57,222			83,426			104,000		
Cal Poly-K.V.		2,060			5,390			10,400	
Long Beach		5,380			12,620			19,630	
Los Angeles		6,900			9,800			18,005	
San Fernando		3,070			10,530			22,105	
Dominguez Hills		---			390			9,390	
Orange County-Fullerton	6,045	410		17,153	4,930		34,000	15,300	
San Bernardino-San Bernardino	5,262	---		9,019	740		13,500	7,010	
Riverside	2,789			5,581			8,500		
Ventura	1,815			4,681			10,400		
Totals	73,133	17,820	24.4	119,860	44,000	36.7	170,400	101,840	59.8
II Greater San Francisco Bay Area									
San Francisco-San Francisco	4,216	7,340		6,626	12,030		6,750	16,875	
Alameda-Hayward	8,155	270		13,500	4,680		17,000	17,225	
Contra Costa	4,958			8,637			11,200		
Marin	1,269			2,633			4,400		
Solano	1,277			2,168			3,125		
San Mateo	4,036			7,578			9,500		
Santa Clara-San Benito	5,877			13,659			24,775		
San Jose		10,270			15,230			20,875	
Napa	632			990			1,275		
Totals	30,420	17,880	58.8	55,791	31,940	57.2	78,025	54,975	70.5
III San Diego Area									
San Diego County-San Diego	9,266	7,180		16,558	13,790		25,000	26,960	
Imperial	649			1,019			1,300		
Totals	9,915	7,180	72.4	17,577	13,790	78.5	26,300	26,960	102.5
IV Sacramento Area									
El Dorado-Yolo-Sacramento	6,234	3,200		12,066	7,660		14,500	15,170	
Totals	6,234	3,200	51.3	12,066	7,660	63.5	14,500	15,170	104.6
V South San Joaquin Valley Area									
Fresno-Madera-Fresno	4,345	4,250		6,929	7,710		7,450	13,450	
Kings-Tulare	2,426			3,464			3,850		
Kern	3,313			4,926			6,150		
Bakersfield		---			---			3,160	
Totals	10,084	4,250	42.1	15,319	7,710	50.3	17,450	16,610	95.2

	ACTUAL						PROJECTED		
	High School Graduates 1959-60	State College Enrollment 1960-61	Ratio	High School Graduates 1966-67	State College Enrollment 1967-68	Ratio	High School Graduates 1979-80	State College Enrollment 1980-81	Ratio
VI North San Joaquin Valley Area									
San Joaquin-Amador-Calaveras	2,861			4,265			5,500		
Merced-Mariposa	1,047			1,866			2,200		
Stanislaus-Tuolumne-Stanislaus S.C.	2,031	170		2,953	750		3,950	3,510	
Totals	5,939	170	2.9	9,080	750	8.3	11,650	3,510	30.1
VII South Central Coast Area									
Santa Barbara	1,347			3,357			4,850		
Monterey	1,482			2,854			3,800		
San Luis Obispo-Cal Poly (SLO)	730	4,380		1,283	7,900		1,550	13,940	
Santa Cruz	794			1,530			2,725		
Totals	4,353	4,380	100.6	9,024	7,900	87.5	12,925	13,940	107.9
VIII Sacramento Valley Area									
Butte-Glenn-Chico	1,202	2,670		1,791	6,220		2,000	12,415	
Colusa-Sutter-Yuba	843			1,331			1,800		
Shasta-Tehama-Trinity	1,209			1,723			2,100		
Totals	3,254	2,670	82.1	4,845	6,220	128.4	5,900	12,415	210.4
IX Northern Coast Area									
Del Norte-Humboldt-Humboldt	1,327	1,620		1,858	3,300		1,700	6,725	
Lake-Mendocino-Sonoma-Sonoma	2,248	--		3,552	1,530		4,800	6,320	
Totals	3,575	1,620	45.3	5,410	4,830	89.3	6,500	13,045	200.7
X Sierra Area	1,964			3,350			3,700		
Totals	1,964	-0-	-0-	3,350	-0-	-0-	3,700	-0-	-0-
State Totals	148,871	59,170	39.7	252,326	125,200	49.6	347,350	258,465	74.4

The results of this analysis are shown in Table G-1.2. It should be noted that 2,215 potential students are projected after ten years of operations -- well below the 3,000 minimum. It is of particular interest that of the total of 2,215 students projected for a potential college in this area, assuming observed 1967 participation rates, that 872 students would have attended a college within the State College system in any event. In other words, the new college would generate student demand for 1,343 additional students over the present participation.

Table G-1.2

Projected Enrollments and Capital Costs of Hypothetical College in Merced and Mariposa County Area

Year	FTE	Annual Growth	Capital Costs	Operating Costs
1971-72	45	45	--	$101,295
1972-73	134	89	--	301,634
1973-74	250	116	--	554,250
1974-75	408	158	--	891,480
1975-76	608	200	--	1,309,024
1976-77	839	231	--	1,780,358
1977-78	1,105	266	--	2,311,660
1978-79	1,435	330	--	2,920,225
1979-80	1,793	358	--	3,598,551
1980-81	2,215	422	$21,968,370	4,272,735
Totals	8,832		$21,968,370	$18,041,212
Cost per student after 10 years			$9,918	$2,043

The case for or against providing college facilities in this or any other area of similar isolation may be ascertained by applying the cost data developed in Appendix D-1 to the alternatives. In the case of the example, the college-going rate of the area might be increased by one of two ways: by providing facilities within the area, or by increasing the mobility of potential students so they might attend another college currently in operation within the system. The first alternative of providing facilities within the area is shown in Table G-1.3 as "Alternative A." Alternative A shows a total capital cost of $21,968,570 for the projected enrollment level. The cumulative operating costs for ten years of operations is projected to be $18,041,212. These, however, are not the only costs due to the implementation of this alternative. The added costs must be considered for higher levels of operating and capital costs per student within the system caused by the lesser in enrollments at existing colleges for those students who would have attended a State College even if the Merced-Mariposa College were not built. The example shows these added costs at Humboldt State College, assuming for simplicity, that all students who would have attended a State College would have enrolled there.

Table G-1.4 shows "Alternative B"--providing facilities at an existing college (Humboldt) for those extra students generated through increasing the college-going rate in the Merced-Mariposa Counties area. Alternative B shows a total capital cost of $53,063,236 or $13,036,854 less than the total capital cost for Alternative A ($21,968,570 + $44,131,620 = $66,100,190). Alternative B also shows cumulative operating costs for the 10-year period of $91,174,348, or $8,749,698 less than the total under Alternative A ($18,041,212 + $81,887,834 = $99,929,046).

Table G-1.3

Alternative A

Providing New College in Merced-Mariposa Counties

Enrollments

	Merced-Mariposa College			Humboldt State College		
Year	Students Previously Attending Other State Colleges	Generated By Location of New Colleges	Total	Current Projected Enrollment	Less Enrollment Now Enrolled At Merced-Mariposa	Adjuste Total
1971-72	45	--	45	4,330	45	4,285
1972-73	134	--	134	4,590	134	4,456
1973-74	250	--	250	4,880	250	4,630
1974-75	408	--	408	5,180	408	4,772
1975-76	608	--	608	5,510	608	4,902
1976-77	839	--	839	5,780	839	4,941
1977-78	872	233	1,105	6,090	872	5,218
1978-79	872	563	1,435	6,250	872	5,378
1979-80	872	921	1,793	6,485	872	5,613
1980-81	872	1,343	2,215	6,725	872	5,853
Total	5,772	3,060	8,832	55,820	5,772	50,048

Costs

	Merced-Mariposa College		Humboldt State College (Less Students Now Attending Merced-Mariposa College)	
Year	Capital	Operating	Capital	Operating
1971-72	--	$ 101,295	--	$ 7,314,495
1972-73	--	301,634	--	7,521,728
1973-74	--	554,250	--	7,727,470
1974-75	--	891,480	--	7,964,468
1975-76	--	1,309,024	--	8,088,300
1976-77	--	1,780,358	--	8,152,650
1977-78	--	2,311,660	--	8,421,852
1978-79	--	2,920,225	--	8,680,092
1979-80	--	3,598,551	--	8,868,540
1980-81	--	4,272,735	--	9,148,239
Total	$21,968,570	$18,041,212	$44,131,620	$81,887,834

Table G-1.4

Alternative B

Provide Facilities at Humboldt for Merced-Mariposa Total Student Demand

Enrollments (Humboldt State College)

Year	Current Enrollment--Including Students from Merced-Mariposa Already in Attendance	Add: Students from Merced-Mariposa Who Would be Generated With Facilities There	Total
1971-72	4,330	--	4,330
1972-73	4,590	--	4,590
1973-74	4,880	--	4,880
1974-75	5,180	--	5,180
1975-76	5,510	--	5,510
1976-77	5,780	--	5,780
1977-78	6,090	233	6,323
1978-79	6,250	563	6,803
1979-80	6,485	921	7,406
1980-81	6,725	1,343	8,068
Total	55,820	3,060	58,880

Costs

Provide Facilities for All Students

Year	Capital	Operating
1971-72	--	$ 7,391,310
1972-73	--	7,747,920
1973-74	--	8,052,000
1974-75	--	8,290,560
1975-76	--	8,799,470
1976-77	--	9,132,400
1977-78	--	9,680,513
1978-79	--	10,102,455
1979-80	--	10,679,452
1980-81	--	11,303,268
Total	$53,063,236	$91,179,348

In other words, providing college facilities in the Merced-Mariposa area for the 3,060 cumulative additional students served during the 10 years has a total added cost of $21,786,552 over that of providing for these students at existing facilities. Theoretically, these students could therefore be granted aid up to $7,120 each ($21,786,552 ÷ 3,060) to increase their mobility to attend any existing State College and have it be still more economical than the construction of facilities within the Merced-Mariposa area. This example also points out the cost and benefits to be derived by increasing the enrollment level through redirection at any existing State College whose current enrollment is at an uneconomical level.

APPENDIX H

LEGISLATIVE RESOLUTIONS REGARDING LOCATION OF ADDITIONAL CENTERS OF PUBLIC HIGHER EDUCATION

Assembly
California Legislature

ASSEMBLY CONCURRENT RESOLUTION

By the Honorable Hale Ashcraft

Relative to a study of the northern San Diego-southern Orange Counties area in connection with the need for establishment of additional centers of higher education.

WHEREAS, The tremendous population growth which has occurred in California in recent years and which will continue for decades to come, confronts the structure of public higher education in California with projected future enrollments at educational institutions of collegiate grade of such magnitude that continued planning for expansion of such facilities is necessary to serve the public interest; and

WHEREAS, The phenomenal growth of the northern San Diego-southern Orange Counties area requires that a coordinated plan for expansion of the California State Colleges must properly consider the need for a campus of the state college system in such area; and

WHEREAS, The population growth of the San Diego-Orange Counties area and vicinity is occurring and evidence indicates that it will continue to grow at a very rapid rate thereby greatly taxing existing facilities of public higher education; and

WHEREAS, Such a study should properly be made by the Coordinating Council for Higher Education in cooperation with the Trustees of the California State Colleges; now, therefore, be it

Resolved by the Assembly of the State of California, the Senate thereof concurring, That the Coordinating Council for Higher Education is requested to include in its next regularly scheduled study on the need for additional centers of higher education, the need and feasibility for the establishment of a state college in the northern San Diego-southern Orange Counties area; and be it further

Resolved, That the Coordinating Council for Higher Education be directed to report thereon to the Legislature on or before the fifth calender day of the 1970 Regular Session, including in the report its findings and recommendations; and, be it further

Resolved, That the Chief Clerk of the Assembly is directed to transmit copies of this resolution to the Coordinating Council for Higher Education and to the Trustees of the California State Colleges.

Assembly Concurrent Resolution No. 4	Adopted in Assembly March 17, 1966
Assembly Concurrent Resolution No. 4	Adopted in Senate March 31 1966

Assembly
California Legislature

RESOLUTION

By Assemblymen Newton R. Russell, Lou Cusanovich,
Howard J. Thelin, Bob Moretti, and Tom Carrell.

Relative to State Colleges

WHEREAS, The tremendous population growth which has occurred in Southern California in recent years and which will continue for decades to come, confronts public higher education in California with projected future enrollments at educational institutions of collegiate grade of such magnitude that continued planning for expansion of such facilities is necessary to serve the public interest; and

WHEREAS, The phenomenal growth of the Sunland-Tujunga-Burbank-Glendale-Sun Valley area in the County of Los Angeles requires that a coordinated plan for expansion of the California State Colleges must properly consider the need for a campus of the state college system in such area; and

WHEREAS, The population growth of the San Fernando Valley area and neighboring cities east of the valley is occurring and evidence indicates that it will continue to grow at a very rapid rate, thereby greatly taxing existing facilities of public higher education; and

WHEREAS, A study to investigate and reevaluate the need for a state college should properly be made by the Coordinating Council for Higher Education in cooperation with the Trustees of the California State Colleges; now, therefore, be it

Resolved by the Assembly of the State of California, That the Assembly request the Coordinating Council for Higher Education to include in its next regularly scheduled study on the need for additional centers of higher education, the need and feasibility for the establishment of a state college in the Sunland-Tujunga-Burbank-Glendale-Sun Valley area of the County of Los Angeles; and be it further

Resolved, That the Coordinating Council for Higher Education be requested to report thereon to the Legislature on or before the fifth calendar day of the 1969 Regular Session, including in the report its findings and recommendations; and be it further

Resolved, That the Chief Clerk of the Assembly is directed to transmit copies of this resolution to the Coordinating Council for Higher Education and to the Trustees of the California State Colleges.

(House Resolution No. 201 read and adopted unanimously April 26, 1966)

Assembly
California Legislature

RESOLUTION

By the Honorable Wadie P. Deddeh, of the 77th District

Relative to establishment of a state college in Southern San Diego County

WHEREAS, Southern San Diego County has experienced tremendous population increase, growth, and development in recent years; and

WHEREAS, The Coordinating Council for Higher Education develops plans for the orderly growth of public higher education and makes recommendations on the need for and location of new facilities and programs, including the establishment of additional California State Colleges; and

WHEREAS, To adequately provide educational opportunities at the collegiate level for the increasing population of secondary school graduates, additional state college facilities are needed, particularly in the area of southern San Diego County; now, therefore, be it

Resolved by the Assembly of the State of California, That the Coordinating Council for Higher Education is respectfully requested to consider in its next study the feasibility of establishing a state college in Southern San Diego County; and be it further

Resolved, That the Chief Clerk of the Assembly is hereby directed to transmit a copy of this resolution to the Coordinating Council for Higher Education.

House Resolution No. 115 read and adopted unanimously
April 4, 1967

Senate

California Legislature

RESOLUTION

By the Honorable Ralph C. Dills of the 32nd District

Relating to State Colleges

WHEREAS, The tremendous population growth which has occurred in Southern California in recent years and which will continue for decades to come, confronts public higher education in California with projected future enrollments at educational institutions of collegiate grade of such magnitude that continued planning for expansion of such facilities is necessary to serve the public interest; and

WHEREAS, The phenomenal growth of the Southwest Los Angeles area bounded by Harbor Freeway, Imperial Boulevard, and the Pacific Ocean, of the County of Los Angeles requires that a coordinated plan for expansion of the California State Colleges must properly consider the need for a campus of the state college system in such area; and

WHEREAS, The population growth of the area is occurring and evidence indicates that it will continue to grow at a very rapid rate, thereby greatly taxing existing facilities of public higher education; and

WHEREAS, A study to investigate and reevaluate the need for a state college should properly be made by the Coordinating Council for Higher Education in cooperation with the Trustees of the California State Colleges; now, therefore, be it

Resolved by the Senate of the State of California, That the Coordinating Council for Higher Education is hereby requested to include in its next regularly scheduled study on the need for additional centers of higher education, the need and feasibility for the establishment of a state college in the Southwest Los Angeles area of the County of Los Angeles which would meet the vocational and professional needs of the community; and be it further

Resolved, That the Coordinating Council for Higher Education is requested to report thereon to the Legislature on or before the fifth calendar day of the 1969 Regular Session, including in the report its findings and recommendations; and be it further

Resolved, That the Secretary of the Senate be hereby directed to transmit copies of this resolution to the Coordinating Council for Higher Education and to the Trustees of the California State Colleges.

(Senate Resolution No. 249 read and adopted unanimously July 26, 1967)

Assembly
California Legislature

RESOLUTION

By the Honorable Frederick James Bear and the Honorable Pete Wilson

Relative to establishing a branch of San Diego State College in the central area of the City of San Diego

WHEREAS, San Diego State College is the only state college in all of San Diego County, an area which has experienced a tremendous population increase in recent years to over 1,250,000 persons; and

WHEREAS, The present San Diego State College is rapidly approaching its maximum projected student population of 20,000 full-time equivalent students, and there is no land available for expansion; and

WHEREAS, There is a need for higher education facilities in the central area of the City of San Diego, southeast San Diego, and southern San Diego County; and

WHEREAS, The student population at San Diego City College, Southwestern College, Grossmont College, and the high schools in the aforementioned areas more than justifies a state college or branch in the central area of the City of San Diego; and

WHEREAS, A state college campus or branch in the central area of the City of San Diego would be a great asset to the city of San Diego, as well as the California State Colleges; and

WHEREAS, A location in the central area of the City of San Diego would be much more convenient regarding transportation in contrast with the other institutions of higher learning that are located, in all cases, miles from the center of San Diego; and

WHEREAS, San Diego City College is presently planning an expansion, and the joint use of facilities of San Diego City College, such as the library and laboratories, would seem to offer great educational benefits and savings, if properly planned and coordinated; and

WHEREAS, The possibility for federal funds now exists for educational development in the central area of the City of San Diego so that the cost of land plus the services necessary for a college may make a location in the central area of the City of San Diego the most desirable from an economic and financial standpoint; and

WHEREAS, Higher education is increasingly regarded as a major industry of San Diego County and also generative of industrial growth, and since the central part of the City of San Diego includes extensive land presently not at its highest use, the central location of a state college or branch is particularly appropriate; and

WHEREAS, The lead time necessary for site selection and development, staffing, and program dictates a prompt study of the need for another state college or branch in San Diego County; and

WHEREAS, The Coordinating Council for Higher Education develops plans for the orderly growth of public higher education and makes recommendations on the need for, and location of, new facilities and programs, including the establishment of additional California State Colleges; and

WHEREAS, To adequately provide educational opportunities at the collegiate level for the increasing population of secondary school graduates, additional state college facilities are needed, particulary in the central area of the City of San Diego; now, therefore, be it

Resolved by the Assembly of the State of California, That the Coordinating Council for Higher Education is respectfully requested to consider in its next study the feasibility of establishing a state college, state college branch, or off-campus facility in the central part of the City of San Diego; and be it further

Resolved, That the Chief Clerk of the Assembly is directed to transmit a copy of this resolution to the Coordinating Council for Higher Education.

(House Resolution No. 404 read and adopted unanimously July 13, 1967)

Assembly
California Legislature

RESOLUTION

By Assemblymen Alan Sieroty, Jesse M. Unruh, Yvonne W. Brathwaite,
Edward E. Elliott, Bill Greene, Lester A. McMillan, Paul Priolo,
Leon Ralph, David A. Roberti, and Charles Warren.
(Coauthor: Senator Anthony C. Beilenson)

Relating to State Colleges

WHEREAS, The tremendous population growth which has occurred in Southern California in recent years and which will continue for decades to come, confronts public higher education in California with projected future enrollments at educational institutions of collegiate grade of such magnitude that continued planning for expansion of such facilities is necessary to serve the public interest; and

WHEREAS, The phenomenal growth of the West Los Angeles area bounded by Sunset Boulevard, Harbor Freeway, Imperial Boulevard, and the Pacific Ocean, of the County of Los Angeles requires that a coordinated plan for expansion of the California State Colleges must properly consider the need for a campus of the state college system in such area; and

WHEREAS, The population growth of the area is occurring and evidence indicates that it will continue to grow at a very rapid rate, thereby greatly taxing existing facilities of public higher education; and

WHEREAS, A study to investigate and reevaluate the need for a state college should properly be made by the Coordinating Council for Higher Education in cooperation with the Trustees of the California State Colleges; now, therefore, be it

Resolved by the Assembly of the State of California, That the Coordinating Council for Higher Education is hereby requested to include in its next regularly scheduled study on the need for additional centers of higher education, the need and feasibility for the establishment of a state college in the West Los Angeles area of the County of Los Angeles which would meet the vocational and professional needs of the community; and be it further

Resolved, That the Coordinating Council for Higher Education is requested to report thereon to the Legislature on or before the fifth calender day of the 1969 Regular Session, including in the report its findings and recommendations; and be it further

Resolved, That the Chief Clerk of the Assembly be hereby directed to transmit copies of this resolution to the Coordinating Council for Higher Education and to the Trustees of the California State Colleges.

(House Resolution No. 235 read and adopted unanimously June 29, 1968)

APPENDIX I

PARTICIPANTS IN SPECIAL MEETINGS OF THE COMMITTEE ON PHYSICAL FACILITIES

APPENDIX I

COORDINATING COUNCIL FOR HIGHER EDUCATION

Committee on Physical Facilities
Special Meeting on the
Need for Additional Centers of Public Higher Education

San Francisco, August 7, 1968

PARTICIPANTS

Name	Representing
Clive Condren, Berkeley	University of California
Edward B. Cornell, Porterville	Tulare County Committee for Higher Education
Raymond V. Darby, Redding	Superintendent of Schools, Shasta County; Redding Four-Year College Committee
Charles Gardner, Hanford	Director of Planning, Kings County
Harry Harmon, Los Angeles	California State Colleges
Don Hillman, Tulare	Member, Board of Supervisors, Tulare County
Erks Hughes, Redding	Redding Four-Year College Committee
John T. Kehoe, Sacramento	California State Colleges
Thomas H. McGrath, Los Angeles	California State Colleges
Robert L. McHale, Hanford	Executive Vice President, Hanford Chamber of Commerce
Hon. George K. Moty, Redding	Mayor, City of Redding; Redding Four-Year College Committee
Miss Karen Pederson, Sacramento	State Legislature, Assembly Minority Consultant
Hon. Helen Putnam, Petaluma	Mayor, City of Petaluma
Wayne Robertson, Tulare	Manager, Tulare Chamber of Commerce; Tulare County Committee for Higher Education
Robert Theiler, Susanville	President, Lassen Junior College
Albert Wagner, Berkeley	University of California
J. M. Wells, Jr., Redding	Chairman, Redding Four-Year College Committee

COORDINATING COUNCIL FOR HIGHER EDUCATION

Committee on Physical Facilities
Special Meeting on the Need for Additional Centers of Public Higher Education

Los Angeles, August 8, 1968

PARTICIPANTS

Name	Representing
James A. Algie, Burbank	City of Burbank
Hon. Frederick James Bear, San Diego	Assemblyman, 79th District
Clifton Cartland, Burbank	Administrative Aide to Assemblyman Newton Russell, 62nd District
Harry Compton, San Diego	Administrative Aide to Senator Clair Burgener, 38th District
Hon. William S. Crow, Escondido	Mayor, City of Escondido
Ricardo de la Cruz, Chula Vista	Chairman, San Ysidro Planning and Development Group
Hon. Troy Doan, Vista	Mayor, City of Vista
James Downing	Northern San Diego County Chamber of Commerce
Walter B. Gieselman, Burbank	President, Board of Education, Burbank Unified School District
Frank Kirk, Carlsbad	Carlsbad Chamber of Commerce
Kenneth Klein, San Diego	City of San Diego, City Planning Department
Charles L. Larrick, Escondido	L H Associates, Consulting Engineers, Escondido
Robert M. Loza, Los Angeles	Development Research Associates, representing The City of Fresno
Charles E. Martin, Carlsbad	City Manager, City of Carlsbad
Harry J. McDevitt, Los Angeles	California State Colleges
Thomas McGrath, Los Angeles	California State Colleges
John W. McMahan, Los Angeles	Development Research Associates, representing The City of Fresno

Name	Representing
Foster C. Merrill, Burbank	Assistant Superintendent of Schools, Burbank Unified School District
William Miller, Chula Vista	City of San Diego, Community Development Department
Miss Karen Pederson, Sacramento	State Legislature, Assembly Minority Consultant
Stanley Riordan, Pasadena	Pasadena City College
Hon. Alan Sieroty, Beverly Hills	Assemblyman, 59th District
Russell L. Thibodo, Vista	- - -
Richard P. Vanek, Solana Beach	Administrative Aide to Assemblyman John Stull, 80th District
Albert Wagner, Berkeley	University of California
C. R. Webb, Los Angeles	California State Colleges
Robert B. Wells, Glendale	Glendale Chamber of Commerce
Hon. John B. Whitney, Burbank	Mayor, City of Burbank
William D. Wilson, Sun Valley	Sun Valley Chamber of Commerce